Versie 21.10.2022

Voorstel NRKP - 2022/DGEC/001

Arthroscopische meniscectomie bij patiënten ouder dan 50 jaar

Algemene notificatie

"Er werd door het Comité van de verzekering voor geneeskundige verzorging en de Algemene raad binnen het RIZIV alsook door de regering geopteerd om een methode voor de integratie van de gezondheidszorgdoelstellingen in de keuzes van de ziekteverzekering te ontwikkelen, dit in combinatie met een dynamisch meerjarig budgettair kader en meer focus op appropriate care – de juiste zorg op de juiste plaats op het juiste moment.

De implementatie van indicatoren blijft één van de hefbomen om hiertoe te komen, met als doel efficiëntiewinsten te genereren door het terugdringen van inappropriate care. De aldus vrijgekomen middelen worden terug geïnvesteerd binnen de gezondheidszorg. Deze oefening behelst dus geenszins een besparingsoperatie.

Indicatoren zijn niet absoluut, waarbij gemotiveerde uitzonderingen steeds mogelijk blijven. In die zin is een indicator een verantwoordingsdrempel."

PROBLEEMSTELLING

- Een arthroscopische meniscectomie is een wegname van (een deel van) de meniscus via kijkoperatie. De ingreep wordt terugbetaald door de ziekteverzekering als alleenstaande ingreep of in associatie met een heelkundige behandeling van de kruisband(en) (*bijlage 1*):

Code	Omschrijving	Vergoeding 2019
276636-276640	Mediale of laterale meniscectomie, ongeacht de techniek N 250	259,94 €
277432-277443	Meniscectomie geassocieerd met één van de verstrekkingen aangeduid met de rangnummers 277336-277340[a], 277351-277362[b]. N 52	54,07 €

- De geboekte uitgaven voor de verstrekkingen 276636-276640 en 277432-277443 bedroegen 9,16 miljoen euro in 2019 (Bron: Documenten P[c]). (*bijlage 2*)
- De EBM-richtlijnen zijn terughoudend voor arthroscopische meniscectomie bij degeneratief knielijden.
- Uit een nationaal onderzoek van de DGEC bleek dat 60 % van de meniscectomieën in Belgie worden uitgevoerd bij patiënten ouder dan 50 jaar. Een beperkte terreinanalyse met dossierinzage wees in de richting van ondoelmatigheid. Er werd een sensibiliseringscampagne verricht bij

[a] 277336-277340 Hechten van één of beide gekruiste knieligamenten, ongeacht de techniek N 250
[b] 277351-277362 Plastie van één of beide gekruiste knieligamenten met tendineus, cutaan of aponeurotisch materiaal, ongeacht de techniek N 400
[c] Statistische tabellen betreffende de verstrekkingen verleend door de zorgverleners in de ambulante en de ziekenhuissector

orthopedisten en huisartsen om hen te wijzen op de internationale klinische richtlijnen (september 2019 - juli 2020). (*bijlage 3*)

- Een voorstel van de DGEC (juni 2020) binnen de werkgroep heelkunde van de Technisch Geneeskundige Raad (TGR) tot invoering van een toepassingsregel in de nomenclatuur voor arthroscopische knie-ingrepen[d] werd niet weerhouden doch resulteerde in een overleg met de kniechirurgen. (*bijlage 4*)

- Naar aanleiding van dit overleg wijdde de Belgische Vereniging voor Orthopedie en Traumatologie (BVOT) een sessie van een symposium aan dit topic (najaar 2020) en formuleerde de Belgian Knee Society (BKS) een richtlijn in verband met de behandeling van degeneratief mediaal meniscusletsel (februari 2021). (*bijlage 5* en *bijlage 6*)

- Ook na de sensibiliseringscampagne door de DGEC en de acties door de BVOT en de BKS is het aandeel meniscectomieën bij patiënten ouder dan 50 jaar niet substantieel verminderd.

- Gelet op de EBM en het beperkte resultaat van de acties door de DGEC, de BVOT en de BKS stellen we voor om een indicator in te voeren. De voorgestelde indicator beoogt het ondoelmatig gebruik van meniscectomie bij patiënten ouder dan 50 jaar te verminderen en de zorgverstrekkers er toe aan te zetten de indicatiestelling van deze ingreep af te stemmen op de klinische richtlijnen.

INFORMATIE

- **Cijfers**
  - Data-analyse op Documenten P (*bijlage 7*)

		2016	2017	2018	2019	2020[e]	2021[f]
276636-276640	Aantal	38.035	35.932	33.974	32.254	21.356	20.445
	% bij 50+	58,6%	59,4%	59,5%	58,8%	57,4%	55,6%
277432-277443	Aantal	1.358	1.386	1.313	1.367	952	654
	% bij 50+	10,8%	10,2%	10,1%	11,5%	14,5%	13,9%

  - Ondanks de sensibiliseringscampagne van de DGEC in 2019 en 2020, het symposium van de BVOT in 2020 en de richtlijn van de BKS van 2021 zakt het percentage alleenstaande meniscectomieën (276636-276640) bij patiënten ouder dan 50 jaar niet substantieel.
  - Ook uitstel van zorg en de focus op essentiële zorg in het kader van de COVID-pandemie blijkt geen noemenswaardige invloed te hebben op dit percentage.

[d] 276636-276640, 277476-277480 (Behandeling van een osteochondraal knieletsel door perforaties of spongialisatie in het geval van gedocumenteerde kraakbeenletsel N 200) en 300311-300322 (Behandeling van een osteochondraal knieletsel door shaving N 175)
[e] Impact COVID-19
[f] Onvolledige gegevens (boekhoudkundig nog niet verwerkt)

- Voor de verdere analyse en de voorgestelde indicator wordt enkel rekening gehouden met de verstrekking 276636-276640, gelet op het relatief beperkt aantal meniscectomieën in associatie met behandeling van de kruisband(en) die tevens voor een andere indicatie plaatsvinden.

- **Literatuur/wetenschappelijke informatie** (*bijlage 8* en *bijlage 9*)
  - Volgens de klinische richtlijnen is bij degeneratief knielijden een conservatieve behandeling te verkiezen boven een arthroscopie.[1] Een arthroscopische behandeling wordt pas aangeraden na uitproberen en falen van een conservatieve behandeling.[2 3 4 5]
  - Arthroscopie bij degeneratief knielijden geeft niet direct voordelen maar vergroot mogelijk wel het risico op bijwerkingen op zowel korte als lange termijn.[6 7]
  - Uit *bijlage 9* blijkt dat het aantal meniscectomieën per 10.000 inwoners in andere landen beduidend lager ligt. [8 9]

- **Contact met de wetenschappelijke en beroepsverenigingen/terreinanalyse**
  - BVOT
    - Na het overleg op initiatief van de werkgroep heelkunde van de TGR werd een sessie van een online symposium gewijd aan chirurgie bij de degeneratieve knie. (*bijlage 5*)
  - BKS
    - De richtlijn "Behandeling degeneratief mediaal meniscusletsel" werd opgesteld in samenwerking met de TGR. Er is in deze richtlijn een grote aandacht voor een conservatieve aanpak gedurende minstens 3 maanden. (*bijlage 6*)
  - Bijkomend contact met BVOT-BKS in het kader van het voorliggende voorstel van indicator: er is voorkeur voor een percentage van 50 % in plaats van 45 %, in afwachting van een betere granulering van de nomenclatuur voor de meniscectomie die wel zou aanwezig zijn in de buurlanden. De argumentatie van BVOT-BKS is terug te vinden in *bijlage 10*. Het komt de NRKP toe om hierover te oordelen.
  - Beperkte terreinanalyse DGEC met dossierinzage eind 2018 wees in de richting van ondoelmatigheid.

- **Andere**
  - Cijfers Noorwegen[9] (*bijlage 9*)
    - Bij een analyse van gegevens van het National Patient Registry in Noorwegen werd een duidelijke algemene vermindering van arthroscopieën van de knie vastgesteld tussen 2012 en 2016 in publiek gefinancierde ziekenhuizen. De grootste daling werd gezien in de regionale gezondheidsautoriteit van Zuidoost-Noorwegen (South-Eastern Norway Regional Health Authority) en viel samen met de invoering van administratieve maatregelen.
    - Het aandeel patiënten van 50 jaar of ouder (exclusief meniscusherstel) viel terug van 54 % in 2012 naar 46 % in 2016.

SITUERING

Gezondheidszorgdoelstellingen (GDOS)

- ☒ Preventieve zorg en chronische ziekten
- ☐ Toegankelijkheid
- ☒ Zorgtraject
- ☐ Mentale gezondheid
- ☐ Geïntegreerde zorg

Relatie Quintuple Aim (5AIM)

- ☒ Kwaliteit van de zorg, zoals ervaren door de persoon met een zorg- en ondersteuningsnood
- ☐ Gezondheid van de bevolking
- ☒ Kosteneffectiviteit, d.w.z. de verhouding tussen de ingezette middelen en de gerealiseerde waarden
- ☐ Rechtvaardigheid in de samenleving met speciale aandacht voor de toegankelijkheid van de gezondheidszorg in brede zin (d.w.z. niet enkel financieel) en met inclusie van verschillende vormen van diversiteit
- ☐ Welzijn van de zorgprofessionals

Relatie regeerakkoord

- Dit voorstel schrijft zich in bij de doelstelling “accountability” in de zorg opgenomen in het regeerakkoord.

Betrokken zorgverstrekkers (*bijlage 11*)

Zorgverstrekker	Orthopedisch chirurgen
Aantal actieve zorgverstrekkers in 2019 (Bron: RIZIV)	1.092
% zorgverstrekkers dat de verstrekking 276636-276640 aanrekende in 2019 (Bron: Documenten P)	53 %

Financieel aspect

- In verrichtingsjaar 2019 werden 32.254 meniscectomieën (276636-276640) aangerekend, waarvan 58,8 % bij patiënten ouder dan 50 jaar.
- De ziekteverzekering vergoedde 259,94 euro voor deze ingreep (vergoeding 2019). Dit betreft enkel de nomenclatuurvergoeding voor de instrumenterende chirurg (exclusief de peri-operatieve intramuros zorg zoals anesthesie, BFM, forfait dagziekenhuis, enz.).
- De uitgaven voor meniscectomie bij patiënten ouder dan 50 jaar bedroegen in 2019 dus 4,93 miljoen euro (= 32.254 meniscectomieën * 58,8 % * 259,94 euro).
- Een afname van het aantal meniscectomieën bij patiënten ouder dan 50 jaar zal een mogelijke verplaatsing van de zorg geven naar transversale activiteiten (meer kinesitherapie, fysiotherapie, hyaluronzuurinfiltraties, medicatie, enz.).
- In *bijlage 12* treft men een raming van de financiële impact voor het voorliggende voorstel van indicator (hoogstens 45 %) en voor het voorstel van BVOT-BKS (hoogstens 50 %).

VOORSTEL VAN INDICATOR

Voorstel

- **De verstrekking met nomenclatuurcode 276636-276640, opgenomen in artikel 14k van de bijlage bij het koninklijk besluit van 14 september 1984 tot vaststelling van de nomenclatuur van de geneeskundige verstrekkingen inzake verplichte verzekering voor geneeskundige verzorging en uitkeringen, mag per kalenderjaar slechts voor 45 % van het totaal aantal verstrekkingen per zorgverlener bij patiënten ouder dan 50 jaar worden geattesteerd.**
  (Een ontwerp van publicatie in het Belgisch Staatsblad is toegevoegd in bijlage 13.)

Motivering

- Bij patiënten ouder dan 50 jaar betreft het vooral degeneratieve letsels, waarbij arthroscopie niet direct voordelen oplevert.
- We baseren ons verder op de cijfers van Noorwegen, waar een algemene vermindering van het aandeel patiënten van 50 jaar of ouder naar 46 % werd gezien niettegenstaande acties in slechts een deel van het land.
- In het eerdere voorstel van de DGEC tot invoering van een toepassingsregel in de nomenclatuur werd verwezen naar een percentage patiënten van 50 jaar en ouder van 20 % van de arthroscopisch uitgevoerde verstrekkingen 276636-276640, 277476-277480 en 300311-300322. Dit werd als zeer drastisch beschouwd.
- De hierop volgende acties van de BVOT en de BKS hebben evenwel geen noemenswaardige verandering bewerkstelligd. De eerdere sensibiliseringscampagne van de DGEC was evenmin toereikend.
- Uit de data-analyse op Documenten P (2018-2019 en 2020-2021) blijkt dat reeds 19 % van de zorgverstrekkers (met gemiddeld minstens 10 ingrepen per jaar) beantwoordt aan deze voorgestelde indicator van hoogstens 45 % van het totaal aantal verstrekkingen per zorgverstrekker bij patiënten ouder dan 50 jaar.
- Volgens de bijkomende berekening op de gegevens van 2019 (*bijlage 9*) komt deze voorgestelde indicator overeen met een totaal van 21,14 meniscectomieën/10.000 inwoners in België, ongeacht de leeftijd. In andere landen ligt dit aantal beduidend lager.

In samenwerking met

KCE en CEBAM (*bijlage 14*)

CONTACTPERSOON

Organisatie: RIZIV - DGEC

E-Mail: secr.dgec.secm@riziv-inami.fgov.be

BIJLAGEN

1. Nomenclatuur
2. Geboekte uitgaven voor 276636-276640 en 277432-277443 in 2019
3. Sensibiliseringsbrieven DGEC
4. Uittreksel uit notulen van de werkgroep heelkunde van de TGR
5. Symposium BVOT
6. Richtlijn BKS
7. Data-analyse op Documenten P
8. Literatuur/wetenschappelijke informatie
9. Vergelijking met andere landen
10. Argumentatie BVOT-BKS
11. Betrokken zorgverstrekkers
12. Raming financiële impact
13. Ontwerp publicatie Belgisch Staatsblad
14. Bevestiging onderschrijving indicator door CEBAM en KCE

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[6] O'Connor, D., Johnston, R. V., Brignardello-Petersen, R., Poolman, R. W., Cyril, S., Vandvik, P. O. & Buchbinder R. (2022). Arthroscopic surgery for degenerative knee disease (osteoarthritis including degenerative meniscal tears). *Cochrane Database of Systematic Reviews*, (3). doi: 10.1002/14651858.CD014328.

[7] Vanhove, A. C., Bekkering, T. & Vankrunkelsven, P. (2022). Artroscopische chirurgie bij degeneratieve knieaandoeningen. *Artsenkrant*, (25), 16.

[8] Jacquet, C., Pujol, N., Pauly, V., Beaufils, P., Ollivier, M. (2019). Analysis of the trends in arthroscopic meniscectomy and meniscus repair procedures in France from 2005 to 2017. *Orthop Traumatol Surg Res*, *105*(4), 677-682. doi: 10.1016/j.otsr.2019.01.024

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Versie 21.10.2022

Voorstel NRKP - 2022/DGEC/001

Arthroscopische meniscectomie bij patiënten ouder dan 50 jaar

⇨ *BIJLAGEN*

1. ***Nomenclatuur***
2. ***Geboekte uitgaven voor 276636-276640 en 277432-277443 in 2019***
3. ***Sensibiliseringsbrieven DGEC***
4. ***Uittreksel uit notulen van de werkgroep heelkunde van de TGR***
5. ***Symposium BVOT***
6. ***Richtlijn BKS***
7. ***Data-analyse op Documenten P***
8. ***Literatuur/wetenschappelijke informatie***
9. ***Vergelijking met andere landen***
10. ***Argumentatie BVOT-BKS***
11. ***Betrokken zorgverstrekkers***
12. ***Raming financiële impact***
13. ***Ontwerp publicatie Belgisch Staatsblad***
14. ***Bevestiging onderschrijving indicator door CEBAM en KCE***

BIJLAGE 1: NOMENCLATUUR

HOOFDSTUK V. - SPECIALE TECHNISCHE GENEESKUNDIGE VERSTREKKINGEN

AFDELING 5. - Heelkunde.

Art. 14. Worden beschouwd als verstrekkingen waarvoor de bekwaming is vereist van geneesheer, specialist voor één van de specialismen die tot de uitwendige pathologie behoren :

k) de verstrekkingen die tot het specialisme orthopedie (DP) behoren :

I. Heelkundige verstrekkingen.

§ 1. Bloedige behandelingen.

D. Onderste ledematen en bekkengordel.

1° Beenderen en articulaties :

276636 276640	Mediale of laterale meniscectomie, ongeacht de techniek	N 250
	Voor de verstrekking aangeduid met de rangnummers 276636-276640, bevindt zich een iconografisch document van de meniscus dat de pre- en post-operatieve beschadigde regio aantoont, in het dossier van de patiënt.	
277432 277443	Meniscectomie geassocieerd met één van de verstrekkingen aangeduid met de rangnummers 277336-277340, 277351-277362.	N 52
	De verstrekking aangeduid met de rangnummers 277432-277443 is cumuleerbaar tegen 100 % met de verstrekkingen aangeduid met de rangnummers 277336-277340, 277351-277362.	
	Voor de verstrekking aangeduid met de rangnummers 277432-277443, bevindt zich een iconografisch document van de meniscus dat de pre- en post-operatieve beschadigde regio aantoont, in het dossier van de patiënt.	

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BIJLAGE 2: GEBOEKTE UITGAVEN VOOR 276636-276640 EN 277432-277443 IN 2019

Uitgaven en gevallen voor de verstrekkingen 276636-276640 en 277432-277443 in boekhoudjaar 2019 (Bron: Documenten P)

Code	Uitgaven			Gevallen		
	Ambulant	Opgenomen	Totaal	Ambulant	Opgenomen	Totaal
276640 - 276636	€8.660.114,23	€424.718,59	€9.084.832,82	54.762	3.005	57.767
277443 - 277432	€13.462,64	€58.667,47	€72.130,11	250	1.117	1.367
Totaal	€8.673.576,87	€483.386,06	€9.156.962,93	55.012	4.122	59.134

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BIJLAGE 3: SENSIBILISERINGSBRIEVEN DGEC

1. Brief gericht aan alle orthopedische chirurgen over doelmatigheid van arthroscopische kniechirurgie bij degeneratief knielijden en meniscusscheuren. 06.09.2019.

2. Herinnering aan sensibiliseringsbrief van 6 september 2019. 30.07.2020.

3. Brief aan alle huisartsen over de doelmatigheid van arthroscopische meniscectomie bij degeneratief knielijden. 30.07.2020.

RIZIV
Rijksinstituut voor ziekte- en invaliditeitsverzekering

DIENST VOOR GENEESKUNDIGE
EVALUATIE EN CONTROLE

Correspondent :
Dr. F. Ameye
Adviseur arts-inspecteur
Directie Evaluatie – Heelkundige verstrekkingen
Email : expertise.DGEC.SECM@riziv-inami.fgov.be
Tel. 02/739 75 28

Onze referte : 2016-000095-I-08

Brussel, 6/09/2019

Geachte collega,

Betreft: brief gericht aan alle orthopedische chirurgen over doelmatigheid van arthroscopische kniechirurgie bij degeneratief knielijden en meniscusscheuren

De Dienst voor geneeskundige evaluatie en controle (DGEC) van het RIZIV heeft de opdracht erop toe te zien dat verstrekkingen doelmatig worden aangewend.

In dit kader voerde onze dienst een nationaal onderzoek over de behandeling van degeneratieve meniscusletsels en de arthroscopische meniscectomie **bij vijftigplussers**. Met deze brief lichten we onze vaststelling toe aan alle orthopedische chirurgen.

Recente klinische richtlijnen voor de behandeling van patiënten met degeneratief knielijden en meniscusscheuren raden een conservatieve houding aan.[1,2] Deze kan bestaan uit gewichtsreductie (indien van toepassing), oefentherapie, infiltratie, medicatie, enz. Deze conservatieve benadering is te verkiezen boven een arthroscopische behandeling en meniscectomie. Arthroscopische kniechirurgie resulteert gemiddeld niet in een verbetering

[1] Arthroscopic surgery for degenerative knee arthritis and meniscal tears: a clinical practice guideline. Siemieniuk RAC, Harris IA, Agoritsas T, Poolman RW, Brignardello-Petersen R, Van de Velde S, Buchbinder R, Englund M, Lytvyn L, Quinlan C, Helsingen L, Knutsen G, Olsen NR, Macdonald H, Hailey L, Wilson HM, Lydiatt A, Kristiansen A. BMJ. 2017 May 10;357:j1982. doi: 10.1136/bmj.j1982

[2] Arthroscopic surgery for knee pain. Järvinen TL, Guyatt GH. BMJ. 2016 Jul 20;354:i3934. doi: 10.1136/bmj.i3934

van de pijn of de functie op lange termijn in deze doelgroep. Complicaties, hoewel zelden (bloeding, embolie), en snellere evolutie naar een totale knieprothese[3] zijn mogelijk.

In een terreinstudie met analyse van de indicatiestelling stelden we vast dat deze richtlijnen niet altijd worden toegepast in de praktijk. Uit de analyse van de facturatie blijkt dat 60% van de 36.388 meniscectomieën aangerekend in België in 2017 werd uitgevoerd bij patiënten ouder dan 50 jaar.
Bijkomend is er nationaal een belangrijke geografische variatie van deze ingrepen.[4]

We vragen u om aandacht te schenken aan deze richtlijnen en het doelmatig gebruik van deze ingreep in uw praktijk te evalueren. De Dienst voor geneeskundige evaluatie en controle zal de situatie gepast opvolgen.

Hoogachtend,

Dr. P. Tavernier
Wnd. leidend ambtenaar

[3] Increased risk for knee replacement surgery after arthroscopic surgery for degenerative meniscal tears: a multi-center longitudinal observational study using data from the osteoarthritis initiative. Rongen JJ, Rovers MM, van Tienen TG, Buma P, Hannink G. Osteoarthritis Cartilage. 2017 Jan;25(1):23-29. doi: 10.1016/j.joca.

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RIZIV
Rijksinstituut voor ziekte- en invaliditeitsverzekering

DIENST VOOR GENEESKUNDIGE
EVALUATIE EN CONTROLE

Correspondent :
Dr. M. Bossens
Arts-inspecteur

Email : Marc.Bossens@riziv-inami.fgov.be
Tel. 016/39 26 18

Onze referte : 2016-000095-I-08

Brussel, 30/07/2020

Herinnering aan onze sensibiliseringsbrief van 6 september 2019

Beste collega,

We hebben vernomen dat er in de gespecialiseerde pers een artikel is verschenen dat melding maakt van 6.000 geplande knieoperaties. Het aandeel meniscectomieën hierin is wellicht beperkt. Toch willen we u herinneren aan onze sensibiliseringsbief over het doelmatig gebruik van arthroscopische kniechirurgie bij degeneratief knielijden[1]. Die brief verstuurden we in september 2019 naar alle orthopedisch chirurgen.

We zijn ervan overtuigd dat u systematisch nagaat of er voldoende indicatie is voor een operatie volgens de recente klinische richtlijnen die een conservatieve aanpak aanbevelen voor de behandeling van degeneratief knielijden en meniscusscheuren.

In dit verband nodigen wij u uit om alle elementen die kunnen aantonen dat deze richtlijnen zijn nageleefd, in het medisch dossier op te nemen. Als inspectiedienst zullen we immers de evolutie van die verstrekking blijven opvolgen. We hebben opgemerkt dat in België 60 % van de patiënten die een meniscectomie ondergingen ouder is dan 50 jaar.

[1] Zie bijgevoegde brief

We overwegen om de praktijkvoering van orthopedisch chirurgen te analyseren die meer dan 20 % van de meniscectomieën uitvoeren bij patiënten ouder dan 50 jaar. Zo willen we de naleving van de klinische richtlijnen nagaan.

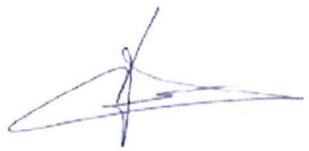
Ook de huisartsen zullen we informeren over de conservatieve aanpak bij de behandeling van degeneratieve knieletsels.

We danken u bij voorbaat.

Hoogachtend,

Dr. Didier Renauld

Arts-inspecteur-generaal DGEC



RIZIV
Rijksinstituut voor ziekte- en invaliditeitsverzekering

DIENST VOOR GENEESKUNDIGE
EVALUATIE EN CONTROLE

Correspondent :

Email : DirE.DGEC.SECM@riziv-inami.fgov.be

Tel.

Onze referte : 2016-000095-I-08

Brussel, 30 juli 2020

Brief aan alle huisartsen over de doelmatigheid van arthroscopische meniscectomie bij degeneratief knielijden.

Geachte collega,

De Dienst voor geneeskundige evaluatie en controle (DGEC) van het RIZIV heeft de opdracht erop toe te zien dat het budget van de ziekteverzekering doelmatig wordt aangewend.

In dit kader heeft onze dienst een nationale analyse gevoerd over de behandeling van degeneratieve meniscusletsels en arthroscopische meniscectomie bij vijftigplussers.

Uit de analyse van de facturatie blijkt dat 61 % van de 33.175 meniscectomieën in 2019 werd uitgevoerd bij patiënten van 50 jaar of ouder. Bijkomend is er een onverklaarbare geografische variatie in ons land.[1]

In een bijbehorende terreinstudie waarbij we de indicatiestelling in het dossier nagingen, stelden we vast dat de EBM-richtlijnen (cf. infra) niet altijd worden toegepast.

[1] https://www.gezondbelgie.be/nl/medische-praktijkvariaties/musculoskeletaal-stelsel/meniscectomie-15-jaar

Met deze brief lichten we onze vaststelling toe aan alle huisartsen. We verstuurden eerder al een gelijkaardige brief naar alle orthopedisch chirurgen. We vragen beide beroepsgroepen om aandacht te schenken aan deze EBM-richtlijnen.

De hoger vermelde richtlijnen voor de behandeling van patiënten met degeneratief knielijden en meniscusscheuren raden een conservatieve houding aan[2,3,4]. Deze kan bestaan uit gewichtsreductie, kinesitherapie, infiltratie, medicatie, enz. Deze conservatieve benadering is te verkiezen boven een arthroscopische behandeling en meniscectomie. Arthroscopische kniechirurgie resulteert gemiddeld niet in een verbetering van de pijn of de functie op lange termijn in deze doelgroep. Complicaties, hoewel zelden (bloeding, embolie), en snellere evolutie naar een ingreep van totale knieprothese zijn mogelijk.[5]

We verwijzen naar een recente publicatie[6] in het Tijdschrift voor geneeskunde over hetzelfde onderwerp met als titel *'Waarom nog een artroscopie bij degeneratieve meniscusscheuren ?'*

We zullen de situatie opvolgen.

Nu reeds danken we u voor uw medewerking.

Hoogachtend,

Dr. Didier Renauld

Arts-inspecteur-generaal DGEC

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[2] Arthroscopic surgery for degenerative knee arthritis and meniscal tears: a clinical practice guideline. BMJ 2017; 357 doi: https:/ doi.org/10.1136/bmj.j1982

[3] Arthroscopic surgery for knee pain. A highly questionable practice without supporting evidence of even moderate quality. T.Järvinen, G.Guyatt. BMJ 2016;354:i3934 doi: https://doi.org/10.1136/bmj.i3934

[4] https://www.has-sante.fr/jcms/c_1525757/en/prise-en-charge-des-patients-de-plus-de-50-ans-ayant-une-lesion-meniscale-douloureuse-non-reparable-sur-genou-stable-traumatisme-aigu-et-blocage-meniscal-aigu-exclus

[5] Increased risk for knee replacement surgery after arthroscopic surgery for degenerative meniscal tears: a multi-center longitudinal observational study using data from the osteoarthritis initiative. Rongen, J.J. et al. Osteoarthritis and Cartilage. 2016. 25(1), 23 – 29. http://dx.doi.org/10.1016/j.joca.2016.09.013

[6] Tijdschr. voor Geneeskunde, 75, nr. 18, 2019.doi: 10.2143/TVG.75.18.2002922

BIJLAGE 4: UITTREKSEL UIT NOTULEN VAN DE WERKGROEP HEELKUNDE VAN DE TGR

Vertrouwelijk karakter

BIJLAGE 5: SYMPOSIUM BVOT

Orthopaedica Belgica 2020. Geraadpleegd op 16 september 2022 via https://orthobelgica.be/ob2020/

Programme

RIZIV/INAMI accreditation approved for a total of 13 points in category 3.

Pro-Q-Kine accreditation under ID 413748: 12 points.

The Congress will be recorded and all the sessions will be available for 6 months.

Thursday 19 November, Online session

16.00 Lifetime Sports

Moderators: *Everard Munting & Jan Noyez*

16.00 Welcome – *Jan Noyez*
16.05 Sport injuries in young soccer players – *Pascal Wernaers*
16.15 Acute spondylolysis in the adolescent athlete – *Jan Sys*
16.25 Injury prevention – *Joke Schuermans*

16.35 Aging tendons – *Bruno Vanhecke*
16.45 Keep on running – *Dirk De Clercq*
17.05 Discussion
17.20 End of session

17.20 Break

17.35 The degenerative joint and Sports

Moderators: Jan Noyez & *Kris Govaers*

Consider the alternatives!
17.35 Injectables: where do we stand now? – *Kristof Sas*
17.45 How to stay away from arthroplasty – *Kris Govaers*
17.55 Orthopride report and future direction – Jan Victor
18.05 Discussion

Impact of sports on joint arthroplasty
18.15 Shoulder arthroplasty and sport – *Geert Declercq*
18.25 Impact sports after knee and Hip Arthroplasty: Should be forbidden – *Thierry Scheerlinck*
18.35 Impact sports after Knee and Hip Arthroplasty : is perfectly possible – *Justin Cobb*
18.45 Are there guidelines for sporting activities after arthroplasty? – *Kris Govaers*

Moderators: *Peter Verdonk & Jan Victor*

Surgery in the degenerative knee
18.55 RIZIV/INAMI analysis: Is there a sense of urgency? – *Jan Victor*
19.05 International perspective – *Pieter-Jan Vandekerckhove*
19.11 Orthopaedic strategy and goals – *Peter Verdonk*
19.17 Current guidelines – *Hilde Vandenneucker*
19.23 Discussion
19.55 Closing remarks – *Jan Noyez*

Friday 20 November, Online session

16.00 Welcome & General Assembly

16.00 Welcome – *Jan Noyez*
16.05 BVOT General Assembly – *Frank Plasschaert & Jan Noyez*

16.15 Trauma and sports: **Frequent fractures in sports "The big five"**

Moderator: *Gerrit De Wachter & Wim Vandesande*

16.15 Clavicle fractures in professional cyclists – *Tom Claes*
16.30 Ankle fractures in sports – *Dan Putineanu*
16.45 The most frequent carpal fractures – *Wim Vandesande*
17.00 Tibial Plateaus fractures in sports – *Ionut Caracudovici*
17.15 Sequellae of hip fractures in sports – *Marc Jayankura*

17.30 Discussion
17.45 End of session

17.45 Break

18.00 BFAS – Specific sports injuries

Moderators: *Giovanni Matricali & Geoffroy Vandeputte*

18.00 Syndesmotic lesions. How to diagnose? – *Laurent Goubau*
18.10 How to treat missed syndesmotic lesions in athletes – *Joris Robberecht*
18.20 Medial ankle instability: is this a concern? – *Stefan Desmyter*
18.30 Achilles tendon rupture: is surgery the best option? – *Karolien Schwagten*
18.40 How to manage stress fractures in "athlete's"? – *Jeroen De Wachter*
18.50 Subtle lesions of the MTP I joint – *Bernhard Devos Bevernage*
19.00 Discussion
19.20 Closing remarks – *Jan Noyez*
19.30 Adjourn

Instructional Course Lectures

Physiotherapists Session in collaboration with AXXON

Broadcasting on Thursday 03 December from 20.00 to 22.15

Moderators: Peter Bruynooghe & Antoon Van Raebroeckx

20.00 Welcome & Introduction – *Jan Noyez*

ACL tears
20.10 Treatment options anno 2020 – *Thomas Luyckx*
20.20 How I rehab the patient after ACL surgery – *Jo Verschueren*
20.30 Q&A

Shoulder instability
20.40 Decision-making in anterior shoulder instability – *Olivier Verborgt*
20.50 How I rehab a patient with shoulder instability – *Styn Vereecken*
21.00 Q&A

Rotator cuff tears
21.10 Understanding the OR, report of the surgeon – *Antoon Van Raebroeckx*
21.20 How do I rehab a shoulder after cuff repair – *Liesbet De Baets*
21.30 *Q&A*

Carpal instability
21.40 A challenge for the surgeon? – *Arne Decramer*
21.50 How I rehab a wrist with carpal instability – *Maaike van der Hoeven*
22.00 *Q&A*

22.15 End of session

BHG – Common Hand and Wrist problems in the recreational Athlete and how to solve them

Broadcasting on Thursday 17 December from 20.00 to 21.40

Moderators: Arne Decramer & Joris Duerinckx

20.00 Welcome & Introduction – *Jan Noyez*
20.10 How to solve wrist pain in gymnasts? – Miryam *Obdeijn*
20.20 Atraumatic dorsal wrist pain in the young athlete – *Joris Duerinckx*
20.30 Sport bracing: options for hand and wrist – *Bart Vaneeckhout*
20.40 Discussion
20.55 Ulnar sided wrist pain in tennis: game over? – *Frederik Verstreken*
21.05 Cyclists: hands on the road – *Arne Decramer*
21.15 Compartment syndrome of the forearm in athletes – *Mathieu Maroy*
21.25 Discussion
21.40 End of Session

Hip – Arthroplasty and sports: A spicy debate

Broadcasting on Thursday 14 January 2021 from 20.00 to 22.00

Moderators: *Kris Govaers & Filiep Bataillie*

20.00 Welcome & Introduction – *Jan Noyez*

It is the approach that matters
20.10 From the front – *Kristoff Corten*
20.25 From the back – *Jan Somers*

It is the bearing
20.40 Does sports require a specific bearing – *Thierry Scheerlinck*

It is the arthroplasty design
20.55 Resurfacing: here to stay – *Koen De Smet*
21.10 It is the stem size: long or short? – *Justin Cobb (UK)*
21.25 It is the head size: big balls? – *Marc Jayankura*

21.40 Discussion
22.00 End of session

Spine – Endoscopic Spinal Surgery

Broadcasting on Thursday 21 January 2020 from 20.00 to 21.50

Moderators: *Hisco Robijn & Peter Van Daele*

20.00 Welcome & Introduction – Jan Noyez
20.05 Full-Endoscopic Spine Surgery, it represents the future! – *Peter Van Daele*
20.50 Full-Endoscopic Spine Surgery: how it changed my practice (pitfalls, outcome)! – *Hisco Robijn*
21.35 Discussion
21.50 End of session

ORGANISED BY

Meet U There
Val des Seigneurs 4 Bus 8
1150 Brussels
Tel: +32 2 771 43 00
registration@orthobelgica.be

Versie 21.10.2022

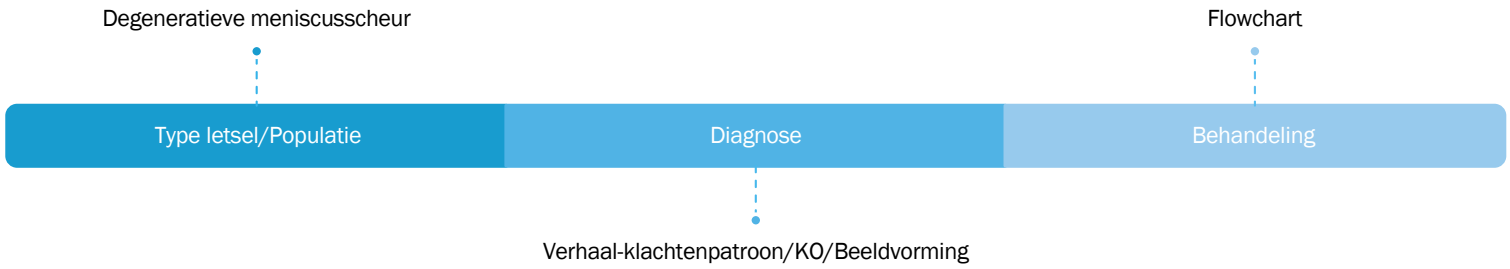
BIJLAGE 6: RICHTLIJN BKS

BKS richtlijn, februari 2021. Behandeling degeneratief mediaal meniscusletsel.

BKS RICHTLIJNEN

BEHANDELING DEGENERATIEF MEDIAAL MENISCUSLETSEL

BelgianKneeSociety


Degeneratieve meniscusscheur
Flowchart
Type letsel/Populatie
Diagnose
Behandeling
Verhaal-klachtenpatroon/KO/Beeldvorming

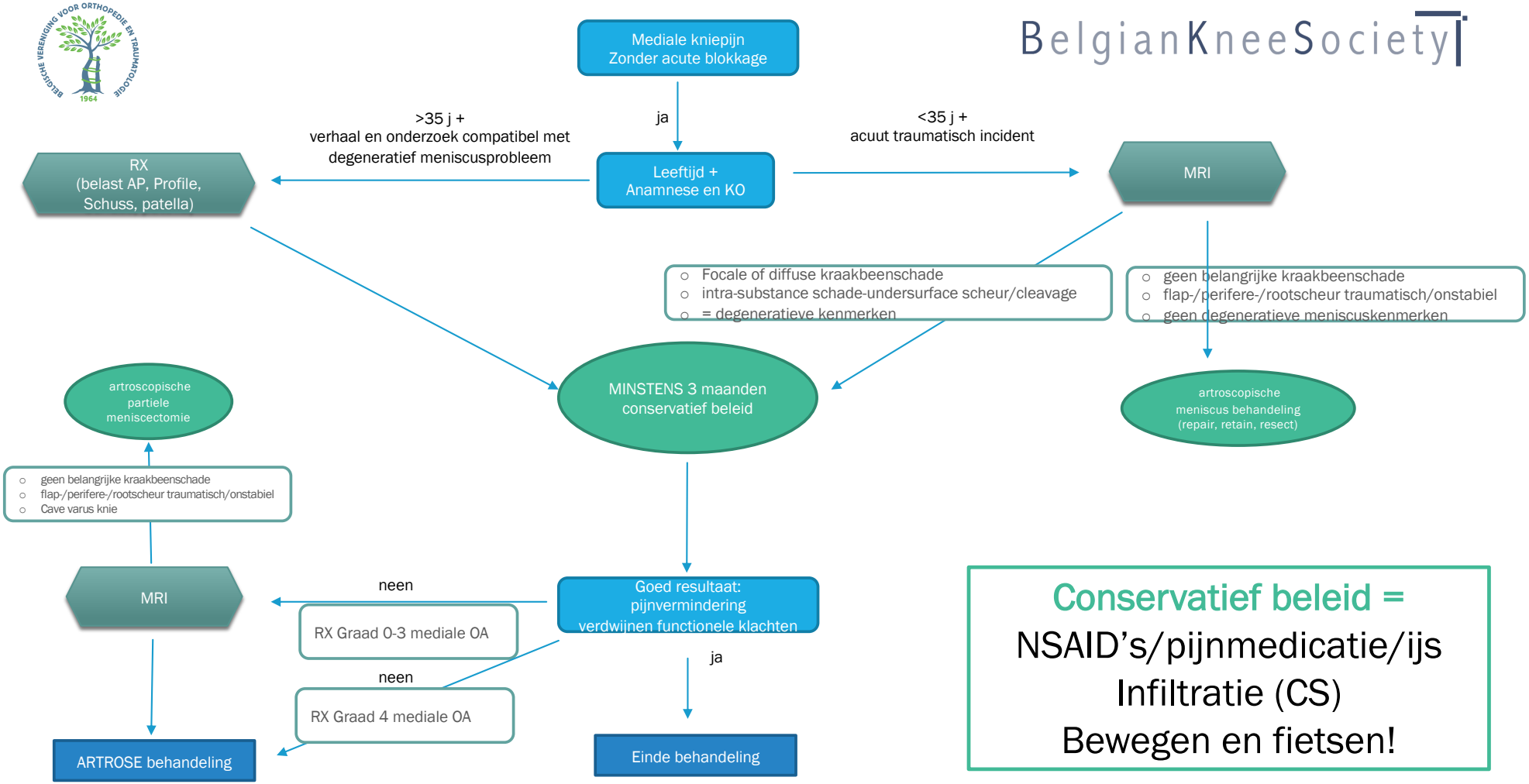
DEFINITIE DEGENERATIEF MENISCUSLETSEL

- progressief ontwikkeld
- typisch beeld van interne weefseldegeneratie met deels horizontale klieving – frequent ‘complexe scheur’
- frequent geassocieerde, matige tot gevorderde, kraakbeenschade
- meestal patient van middelbare of oudere leeftijd – geen absolute leeftijdsgrens
- vaak toevallige vaststelling (op MRI): geen correlatie met klinisch onderzoek, verdacht voor meniscusletsel
- GEEN DUIDELIJK verhaal van trauma of acuut incident / discordantie ernst trauma-bevindingen

DIAGNOSTISCHE ONDERZOEKEN

- Anamnese en KO compatibel met degeneratief meniscusprobleem
- overweeg eventueel (bij belangrijke klachten) een standaard RX knie, inclusief belaste AP fixed flexie-opname
- MRI typisch niet geïndiceerd in initiële behandelingsstadium – uitzonderingen : zie flowchart – CT niet zinvol

FLOWCHART BEHANDELING


Mediale kniepijn
Zonder acute blokkage
ja
>35 j +
verhaal en onderzoek compatibel met
degeneratief meniscusprobleem
<35 j +
acuut traumatisch incident
RX
(belast AP, Profile,
Schuss, patella)
Leeftijd +
Anamnese en KO
MRI
Focale of diffuse kraakbeenschade
intra-substance schade-undersurface scheur/cleavage
= degeneratieve kenmerken
geen belangrijke kraakbeenschade
flap-/perifere-/rootscheur traumatisch/onstabiel
geen degeneratieve meniscuskenmerken
MINSTENS 3 maanden
conservatief beleid
artroscopische
partiele
meniscectomie
artroscopische
meniscus behandeling
(repair, retain, resect)
geen belangrijke kraakbeenschade
flap-/perifere-/rootscheur traumatisch/onstabiel
Cave varus knie
MRI
neen
Goed resultaat:
pijnvermindering
verdwijnen functionele klachten
RX Graad 0-3 mediale OA
neen
ja
RX Graad 4 mediale OA
ARTROSE behandeling
Einde behandeling
Conservatief beleid =
NSAID's/pijnmedicatie/ijs
Infiltratie (CS)
Bewegen en fietsen!

Versie 21.10.2022

BIJLAGE 7: DATA-ANALYSE OP DOCUMENTEN P

Evolutie van het aantal verrichte ingrepen 276636-276640, 277432-277443 en 300414-300425[a] in 2016 - 2021, alsook het percentage ingrepen verricht bij patiënten ouder dan 50 jaar

		2016	2017	2018	2019	2020[b]	2021[c]
276636-276640	Aantal	38.035	35.932	33.974	32.254	21.356	20.445
	% bij 50+	58,6%	59,4%	59,5%	58,8%	57,4%	55,6%
277432-277443	Aantal	1.358	1.386	1.313	1.367	952	654
	% bij 50+	10,8%	10,2%	10,1%	11,5%	14,5%	13,9%
300414-300425	Aantal	873	989	985	1.091	1.026	1.195
	% bij 50+	8,7%	10,1%	12,0%	13,3%	14,7%	15,8%

NB: De documenten P bevatten geen exacte geboortedatum van de verzekerde, maar enkel het geboortejaar. Een patiënt is daarom pas bij de categorie 50+ gerekend wanneer die met zekerheid 50 of ouder was op het moment van de ingreep (geboren in of vóór het jaar -51 ten opzichte van het jaar van prestatie).

In 2018 - 2019 hebben 456 zorgverstrekkers gemiddeld minstens 10 meniscectomieën per jaar[d] verricht:

- 394 van de 456 zorgverstrekkers beantwoorden niet aan een indicator van hoogstens 45 % = 394/456 = 0,86 = 86 %
- 62 van de 456 zorgverstrekkers beantwoorden wel aan een indicator van hoogstens 45 % = 62/456 = 0,14 = 14 %

In 2020 - 2021 hebben 375 zorgverstrekkers gemiddeld minstens 10 meniscectomieën per jaar verricht:

- 305 van de 375 zorgverstrekkers beantwoorden niet aan een indicator van hoogstens 45 % = 305/375 = 81 %
- 70 zorgverstrekkers beantwoorden wel aan een indicator van hoogstens 45 % = 70/375 = 19 %

NB: De tabel met cijfers per (anonieme) zorgverstrekker voor 2020 - 2021 is niet toegevoegd aan de bijlagen, doch kan indien gewenst nog bezorgd worden.

[a] 300414-300425 Hechting van een meniscusscheur, ongeacht de techniek N 275
[b] Impact COVID-19
[c] Onvolledige gegevens (boekhoudkundig nog niet verwerkt)
[d] 20 verstrekkingen 276636-276640 per verrichtingsperiode van 2 jaar

Zorgverstrekker	Verstrekking	Aantal (verricht 2018-2019)	% bij 50+ (verricht 2018-2019)
1	276636 276640	744	66,5%
2	276636 276640	617	69,7%
3	276636 276640	604	47,5%
4	276636 276640	591	58,5%
5	276636 276640	556	69,1%
6	276636 276640	556	47,3%
7	276636 276640	522	63,0%
8	276636 276640	517	60,3%
9	276636 276640	507	63,1%
10	276636 276640	507	60,4%
11	276636 276640	493	58,2%
12	276636 276640	488	62,3%
13	276636 276640	466	60,7%
14	276636 276640	453	62,7%
15	276636 276640	452	66,6%
16	276636 276640	449	57,0%
17	276636 276640	442	31,2%
18	276636 276640	440	58,0%
19	276636 276640	439	54,2%
20	276636 276640	431	63,3%
21	276636 276640	427	48,7%
22	276636 276640	425	47,8%
23	276636 276640	423	72,1%
24	276636 276640	411	65,7%
25	276636 276640	402	64,4%
26	276636 276640	395	54,7%
27	276636 276640	390	67,9%
28	276636 276640	382	64,1%
29	276636 276640	379	70,4%
30	276636 276640	377	52,8%
31	276636 276640	377	53,1%
32	276636 276640	374	47,6%
33	276636 276640	368	49,7%
34	276636 276640	368	57,1%
35	276636 276640	362	54,1%
36	276636 276640	360	62,2%
37	276636 276640	353	65,2%
38	276636 276640	349	72,5%
39	276636 276640	346	68,2%
40	276636 276640	346	69,4%
41	276636 276640	338	48,8%
42	276636 276640	329	70,5%
43	276636 276640	328	75,3%
44	276636 276640	324	67,9%
45	276636 276640	321	70,7%
46	276636 276640	318	60,7%
47	276636 276640	317	70,3%
48	276636 276640	315	67,6%

49	276636 276640	313	77,6%
50	276636 276640	309	44,0%
51	276636 276640	308	48,4%
52	276636 276640	306	67,3%
53	276636 276640	305	66,2%
54	276636 276640	304	61,8%
55	276636 276640	303	58,1%
56	276636 276640	302	52,3%
57	276636 276640	300	47,3%
58	276636 276640	298	61,4%
59	276636 276640	296	73,0%
60	276636 276640	294	77,9%
61	276636 276640	287	51,9%
62	276636 276640	284	62,7%
63	276636 276640	284	65,1%
64	276636 276640	278	62,2%
65	276636 276640	270	54,1%
66	276636 276640	269	50,6%
67	276636 276640	266	60,5%
68	276636 276640	264	75,0%
69	276636 276640	263	79,8%
70	276636 276640	261	72,8%
71	276636 276640	260	64,2%
72	276636 276640	257	48,6%
73	276636 276640	254	70,5%
74	276636 276640	253	39,5%
75	276636 276640	252	68,3%
76	276636 276640	251	50,6%
77	276636 276640	250	74,0%
78	276636 276640	250	62,4%
79	276636 276640	245	64,9%
80	276636 276640	245	44,1%
81	276636 276640	243	67,1%
82	276636 276640	240	63,8%
83	276636 276640	239	67,4%
84	276636 276640	236	57,6%
85	276636 276640	235	71,9%
86	276636 276640	234	75,2%
87	276636 276640	233	46,8%
88	276636 276640	232	77,6%
89	276636 276640	230	54,8%
90	276636 276640	230	23,9%
91	276636 276640	228	65,8%
92	276636 276640	225	53,3%
93	276636 276640	223	66,4%
94	276636 276640	220	67,7%
95	276636 276640	218	68,3%
96	276636 276640	217	71,9%
97	276636 276640	217	53,0%
98	276636 276640	216	63,4%

99	276636 276640	213	44,1%
100	276636 276640	212	49,5%
101	276636 276640	212	37,3%
102	276636 276640	212	42,9%
103	276636 276640	209	55,0%
104	276636 276640	206	67,0%
105	276636 276640	206	25,7%
106	276636 276640	202	67,3%
107	276636 276640	202	66,3%
108	276636 276640	201	47,8%
109	276636 276640	201	66,2%
110	276636 276640	199	64,3%
111	276636 276640	198	62,6%
112	276636 276640	198	69,2%
113	276636 276640	198	56,1%
114	276636 276640	197	74,1%
115	276636 276640	194	74,7%
116	276636 276640	194	63,4%
117	276636 276640	193	64,8%
118	276636 276640	192	63,5%
119	276636 276640	191	56,0%
120	276636 276640	190	45,8%
121	276636 276640	184	39,1%
122	276636 276640	183	62,8%
123	276636 276640	182	50,5%
124	276636 276640	182	51,1%
125	276636 276640	180	40,6%
126	276636 276640	176	65,3%
127	276636 276640	176	70,5%
128	276636 276640	176	56,3%
129	276636 276640	176	50,6%
130	276636 276640	175	65,1%
131	276636 276640	175	64,0%
132	276636 276640	174	59,2%
133	276636 276640	174	33,9%
134	276636 276640	173	38,7%
135	276636 276640	173	73,4%
136	276636 276640	173	45,1%
137	276636 276640	172	55,2%
138	276636 276640	172	59,3%
139	276636 276640	171	60,2%
140	276636 276640	167	62,3%
141	276636 276640	165	61,8%
142	276636 276640	165	47,9%
143	276636 276640	163	72,4%
144	276636 276640	161	86,3%
145	276636 276640	161	57,8%
146	276636 276640	160	64,4%
147	276636 276640	159	36,5%
148	276636 276640	158	57,0%

149	276636 276640	158	67,1%
150	276636 276640	156	60,3%
151	276636 276640	156	73,1%
152	276636 276640	155	69,7%
153	276636 276640	154	59,7%
154	276636 276640	154	70,1%
155	276636 276640	152	38,2%
156	276636 276640	150	69,3%
157	276636 276640	150	52,0%
158	276636 276640	148	59,5%
159	276636 276640	146	58,9%
160	276636 276640	146	59,6%
161	276636 276640	145	53,1%
162	276636 276640	145	54,5%
163	276636 276640	143	51,0%
164	276636 276640	143	60,8%
165	276636 276640	142	50,0%
166	276636 276640	140	76,4%
167	276636 276640	140	67,9%
168	276636 276640	140	33,6%
169	276636 276640	139	61,9%
170	276636 276640	138	58,0%
171	276636 276640	137	50,4%
172	276636 276640	137	71,5%
173	276636 276640	136	59,6%
174	276636 276640	135	51,9%
175	276636 276640	135	62,2%
176	276636 276640	135	50,4%
177	276636 276640	134	50,0%
178	276636 276640	133	64,7%
179	276636 276640	133	56,4%
180	276636 276640	133	34,6%
181	276636 276640	133	52,6%
182	276636 276640	133	60,9%
183	276636 276640	131	49,6%
184	276636 276640	131	31,3%
185	276636 276640	131	47,3%
186	276636 276640	130	57,7%
187	276636 276640	128	57,0%
188	276636 276640	128	63,3%
189	276636 276640	127	67,7%
190	276636 276640	127	55,9%
191	276636 276640	126	47,6%
192	276636 276640	123	44,7%
193	276636 276640	122	76,2%
194	276636 276640	121	56,2%
195	276636 276640	120	56,7%
196	276636 276640	120	64,2%
197	276636 276640	120	60,8%
198	276636 276640	119	52,1%

199	276636 276640	119	54,6%
200	276636 276640	119	68,9%
201	276636 276640	119	68,1%
202	276636 276640	117	59,0%
203	276636 276640	116	74,1%
204	276636 276640	116	78,4%
205	276636 276640	114	67,5%
206	276636 276640	112	57,1%
207	276636 276640	112	60,7%
208	276636 276640	112	73,2%
209	276636 276640	112	60,7%
210	276636 276640	112	58,0%
211	276636 276640	112	38,4%
212	276636 276640	111	45,0%
213	276636 276640	111	53,2%
214	276636 276640	111	59,5%
215	276636 276640	110	50,0%
216	276636 276640	109	74,3%
217	276636 276640	109	64,2%
218	276636 276640	109	45,9%
219	276636 276640	108	67,6%
220	276636 276640	107	57,9%
221	276636 276640	107	46,7%
222	276636 276640	107	56,1%
223	276636 276640	107	61,7%
224	276636 276640	105	59,0%
225	276636 276640	105	61,0%
226	276636 276640	104	51,9%
227	276636 276640	104	62,5%
228	276636 276640	104	58,7%
229	276636 276640	104	39,4%
230	276636 276640	103	55,3%
231	276636 276640	102	63,7%
232	276636 276640	102	75,5%
233	276636 276640	102	60,8%
234	276636 276640	102	42,2%
235	276636 276640	100	28,0%
236	276636 276640	100	66,0%
237	276636 276640	99	72,7%
238	276636 276640	99	56,6%
239	276636 276640	99	66,7%
240	276636 276640	99	65,7%
241	276636 276640	98	51,0%
242	276636 276640	96	66,7%
243	276636 276640	95	34,7%
244	276636 276640	95	58,9%
245	276636 276640	95	61,1%
246	276636 276640	94	55,3%
247	276636 276640	94	73,4%
248	276636 276640	94	64,9%

249	276636 276640	94	69,1%
250	276636 276640	93	67,7%
251	276636 276640	93	57,0%
252	276636 276640	93	55,9%
253	276636 276640	92	55,4%
254	276636 276640	92	57,6%
255	276636 276640	92	45,7%
256	276636 276640	92	67,4%
257	276636 276640	91	68,1%
258	276636 276640	91	50,5%
259	276636 276640	91	47,3%
260	276636 276640	90	56,7%
261	276636 276640	89	48,3%
262	276636 276640	89	68,5%
263	276636 276640	87	73,6%
264	276636 276640	87	81,6%
265	276636 276640	87	66,7%
266	276636 276640	86	48,8%
267	276636 276640	86	53,5%
268	276636 276640	84	46,4%
269	276636 276640	84	40,5%
270	276636 276640	83	53,0%
271	276636 276640	83	61,4%
272	276636 276640	83	53,0%
273	276636 276640	83	63,9%
274	276636 276640	82	51,2%
275	276636 276640	82	45,1%
276	276636 276640	78	44,9%
277	276636 276640	78	61,5%
278	276636 276640	78	61,5%
279	276636 276640	77	49,4%
280	276636 276640	77	49,4%
281	276636 276640	77	72,7%
282	276636 276640	76	57,9%
283	276636 276640	75	72,0%
284	276636 276640	75	62,7%
285	276636 276640	75	77,3%
286	276636 276640	75	70,7%
287	276636 276640	74	60,8%
288	276636 276640	74	59,5%
289	276636 276640	73	78,1%
290	276636 276640	72	44,4%
291	276636 276640	70	70,0%
292	276636 276640	70	61,4%
293	276636 276640	69	33,3%
294	276636 276640	69	62,3%
295	276636 276640	68	64,7%
296	276636 276640	68	50,0%
297	276636 276640	68	60,3%
298	276636 276640	68	64,7%

299	276636 276640	68	55,9%
300	276636 276640	67	71,6%
301	276636 276640	66	57,6%
302	276636 276640	66	50,0%
303	276636 276640	65	49,2%
304	276636 276640	64	76,6%
305	276636 276640	63	44,4%
306	276636 276640	62	48,4%
307	276636 276640	62	64,5%
308	276636 276640	62	61,3%
309	276636 276640	61	54,1%
310	276636 276640	61	55,7%
311	276636 276640	61	73,8%
312	276636 276640	61	67,2%
313	276636 276640	60	76,7%
314	276636 276640	60	75,0%
315	276636 276640	60	63,3%
316	276636 276640	59	44,1%
317	276636 276640	58	63,8%
318	276636 276640	58	74,1%
319	276636 276640	58	60,3%
320	276636 276640	57	73,7%
321	276636 276640	57	47,4%
322	276636 276640	57	47,4%
323	276636 276640	57	59,6%
324	276636 276640	55	40,0%
325	276636 276640	55	54,5%
326	276636 276640	54	51,9%
327	276636 276640	54	35,2%
328	276636 276640	53	50,9%
329	276636 276640	53	62,3%
330	276636 276640	53	50,9%
331	276636 276640	52	73,1%
332	276636 276640	52	73,1%
333	276636 276640	52	61,5%
334	276636 276640	52	63,5%
335	276636 276640	51	54,9%
336	276636 276640	51	64,7%
337	276636 276640	50	38,0%
338	276636 276640	49	71,4%
339	276636 276640	49	65,3%
340	276636 276640	49	46,9%
341	276636 276640	49	59,2%
342	276636 276640	49	53,1%
343	276636 276640	48	58,3%
344	276636 276640	48	62,5%
345	276636 276640	48	33,3%
346	276636 276640	48	45,8%
347	276636 276640	47	38,3%
348	276636 276640	47	53,2%

349	276636 276640	46	65,2%
350	276636 276640	45	73,3%
351	276636 276640	45	66,7%
352	276636 276640	45	44,4%
353	276636 276640	44	59,1%
354	276636 276640	44	68,2%
355	276636 276640	44	65,9%
356	276636 276640	44	75,0%
357	276636 276640	43	65,1%
358	276636 276640	43	69,8%
359	276636 276640	43	46,5%
360	276636 276640	43	44,2%
361	276636 276640	43	44,2%
362	276636 276640	43	74,4%
363	276636 276640	42	45,2%
364	276636 276640	42	66,7%
365	276636 276640	41	56,1%
366	276636 276640	41	65,9%
367	276636 276640	41	68,3%
368	276636 276640	41	65,9%
369	276636 276640	41	29,3%
370	276636 276640	38	42,1%
371	276636 276640	38	47,4%
372	276636 276640	38	36,8%
373	276636 276640	38	84,2%
374	276636 276640	38	65,8%
375	276636 276640	37	73,0%
376	276636 276640	37	67,6%
377	276636 276640	37	29,7%
378	276636 276640	37	48,6%
379	276636 276640	36	44,4%
380	276636 276640	36	19,4%
381	276636 276640	36	47,2%
382	276636 276640	36	63,9%
383	276636 276640	36	61,1%
384	276636 276640	36	52,8%
385	276636 276640	35	51,4%
386	276636 276640	35	60,0%
387	276636 276640	35	42,9%
388	276636 276640	34	41,2%
389	276636 276640	34	61,8%
390	276636 276640	34	38,2%
391	276636 276640	34	73,5%
392	276636 276640	34	50,0%
393	276636 276640	34	67,6%
394	276636 276640	34	58,8%
395	276636 276640	33	48,5%
396	276636 276640	33	57,6%
397	276636 276640	33	21,2%
398	276636 276640	33	45,5%

399	276636 276640	33	21,2%
400	276636 276640	33	45,5%
401	276636 276640	32	65,6%
402	276636 276640	32	46,9%
403	276636 276640	32	62,5%
404	276636 276640	32	50,0%
405	276636 276640	32	56,3%
406	276636 276640	32	46,9%
407	276636 276640	31	29,0%
408	276636 276640	31	67,7%
409	276636 276640	31	61,3%
410	276636 276640	31	48,4%
411	276636 276640	31	51,6%
412	276636 276640	31	48,4%
413	276636 276640	30	60,0%
414	276636 276640	29	51,7%
415	276636 276640	29	58,6%
416	276636 276640	29	55,2%
417	276636 276640	29	58,6%
418	276636 276640	28	60,7%
419	276636 276640	28	78,6%
420	276636 276640	28	89,3%
421	276636 276640	28	42,9%
422	276636 276640	28	71,4%
423	276636 276640	28	50,0%
424	276636 276640	28	53,6%
425	276636 276640	27	81,5%
426	276636 276640	27	40,7%
427	276636 276640	27	63,0%
428	276636 276640	27	51,9%
429	276636 276640	27	63,0%
430	276636 276640	27	40,7%
431	276636 276640	26	38,5%
432	276636 276640	26	61,5%
433	276636 276640	26	46,2%
434	276636 276640	25	80,0%
435	276636 276640	25	52,0%
436	276636 276640	25	48,0%
437	276636 276640	24	37,5%
438	276636 276640	24	33,3%
439	276636 276640	24	41,7%
440	276636 276640	24	70,8%
441	276636 276640	23	56,5%
442	276636 276640	23	56,5%
443	276636 276640	23	56,5%
444	276636 276640	23	47,8%
445	276636 276640	23	52,2%
446	276636 276640	23	73,9%
447	276636 276640	22	54,5%
448	276636 276640	22	31,8%

449	276636 276640	22	36,4%
450	276636 276640	21	66,7%
451	276636 276640	21	33,3%
452	276636 276640	21	9,5%
453	276636 276640	20	75,0%
454	276636 276640	20	60,0%
455	276636 276640	20	50,0%
456	276636 276640	20	80,0%
457	276636 276640	19	47,4%
458	276636 276640	19	57,9%
459	276636 276640	19	47,4%
460	276636 276640	19	31,6%
461	276636 276640	19	26,3%
462	276636 276640	18	61,1%
463	276636 276640	18	55,6%
464	276636 276640	18	61,1%
465	276636 276640	18	27,8%
466	276636 276640	18	44,4%
467	276636 276640	18	61,1%
468	276636 276640	18	50,0%
469	276636 276640	17	35,3%
470	276636 276640	17	88,2%
471	276636 276640	16	81,3%
472	276636 276640	16	62,5%
473	276636 276640	16	43,8%
474	276636 276640	15	60,0%
475	276636 276640	15	60,0%
476	276636 276640	15	40,0%
477	276636 276640	15	53,3%
478	276636 276640	14	35,7%
479	276636 276640	14	57,1%
480	276636 276640	14	92,9%
481	276636 276640	14	57,1%
482	276636 276640	14	64,3%
483	276636 276640	13	7,7%
484	276636 276640	13	84,6%
485	276636 276640	13	53,8%
486	276636 276640	13	76,9%
487	276636 276640	12	83,3%
488	276636 276640	12	66,7%
489	276636 276640	12	83,3%
490	276636 276640	11	100,0%
491	276636 276640	11	27,3%
492	276636 276640	11	45,5%
493	276636 276640	10	10,0%
494	276636 276640	10	60,0%
495	276636 276640	10	30,0%
496	276636 276640	10	70,0%
497	276636 276640	10	70,0%
498	276636 276640	10	60,0%

499	276636 276640	9	88,9%
500	276636 276640	9	22,2%
501	276636 276640	9	77,8%
502	276636 276640	9	33,3%
503	276636 276640	9	88,9%
504	276636 276640	9	77,8%
505	276636 276640	8	25,0%
506	276636 276640	8	100,0%
507	276636 276640	8	37,5%
508	276636 276640	8	62,5%
509	276636 276640	8	75,0%
510	276636 276640	8	87,5%
511	276636 276640	7	71,4%
512	276636 276640	7	71,4%
513	276636 276640	7	100,0%
514	276636 276640	7	42,9%
515	276636 276640	7	28,6%
516	276636 276640	7	0,0%
517	276636 276640	6	33,3%
518	276636 276640	6	66,7%
519	276636 276640	6	100,0%
520	276636 276640	6	33,3%
521	276636 276640	5	100,0%
522	276636 276640	5	60,0%
523	276636 276640	5	40,0%
524	276636 276640	5	60,0%
525	276636 276640	5	20,0%
526	276636 276640	5	100,0%
527	276636 276640	5	60,0%
528	276636 276640	5	80,0%
529	276636 276640	5	80,0%
530	276636 276640	5	60,0%
531	276636 276640	4	75,0%
532	276636 276640	4	75,0%
533	276636 276640	4	50,0%
534	276636 276640	4	25,0%
535	276636 276640	3	0,0%
536	276636 276640	3	100,0%
537	276636 276640	3	100,0%
538	276636 276640	3	66,7%
539	276636 276640	3	100,0%
540	276636 276640	3	100,0%
541	276636 276640	3	66,7%
542	276636 276640	3	33,3%
543	276636 276640	3	66,7%
544	276636 276640	3	66,7%
545	276636 276640	3	100,0%
546	276636 276640	3	33,3%
547	276636 276640	3	33,3%
548	276636 276640	3	66,7%

549	276636 276640	3	100,0%
550	276636 276640	3	33,3%
551	276636 276640	3	0,0%
552	276636 276640	3	0,0%
553	276636 276640	3	66,7%
554	276636 276640	3	33,3%
555	276636 276640	3	33,3%
556	276636 276640	3	33,3%
557	276636 276640	3	0,0%
558	276636 276640	3	33,3%
559	276636 276640	2	50,0%
560	276636 276640	2	100,0%
561	276636 276640	2	50,0%
562	276636 276640	2	0,0%
563	276636 276640	2	100,0%
564	276636 276640	2	50,0%
565	276636 276640	2	50,0%
566	276636 276640	2	100,0%
567	276636 276640	2	100,0%
568	276636 276640	2	50,0%
569	276636 276640	2	100,0%
570	276636 276640	2	50,0%
571	276636 276640	2	100,0%
572	276636 276640	2	0,0%
573	276636 276640	2	100,0%
574	276636 276640	2	50,0%
575	276636 276640	2	100,0%
576	276636 276640	2	50,0%
577	276636 276640	2	50,0%
578	276636 276640	2	0,0%
579	276636 276640	2	50,0%
580	276636 276640	2	100,0%
581	276636 276640	1	100,0%
582	276636 276640	1	100,0%
583	276636 276640	1	100,0%
584	276636 276640	1	100,0%
585	276636 276640	1	100,0%
586	276636 276640	1	100,0%
587	276636 276640	1	100,0%
588	276636 276640	1	100,0%
589	276636 276640	1	100,0%
590	276636 276640	1	100,0%
591	276636 276640	1	100,0%
592	276636 276640	1	100,0%
593	276636 276640	1	100,0%
594	276636 276640	1	100,0%
595	276636 276640	1	100,0%
596	276636 276640	1	0,0%
597	276636 276640	1	0,0%
598	276636 276640	1	100,0%

599	276636 276640	1	100,0%
600	276636 276640	1	100,0%
601	276636 276640	1	100,0%
602	276636 276640	1	100,0%
603	276636 276640	1	0,0%
604	276636 276640	1	0,0%
605	276636 276640	1	100,0%
606	276636 276640	1	100,0%
607	276636 276640	1	0,0%
608	276636 276640	1	100,0%
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612	276636 276640	1	0,0%
613	276636 276640	1	0,0%
614	276636 276640	1	100,0%
615	276636 276640	1	100,0%
616	276636 276640	1	100,0%
617	276636 276640	1	100,0%
618	276636 276640	1	100,0%
619	276636 276640	1	100,0%
620	276636 276640	1	0,0%
621	276636 276640	1	100,0%
622	276636 276640	1	0,0%
623	276636 276640	1	100,0%
624	276636 276640	1	100,0%
625	276636 276640	1	0,0%
626	276636 276640	1	100,0%
627	276636 276640	1	0,0%
628	276636 276640	1	100,0%
629	276636 276640	1	100,0%
630	276636 276640	1	0,0%
631	276636 276640	1	100,0%
632	276636 276640	1	100,0%
633	276636 276640	1	0,0%
634	276636 276640	1	100,0%
635	276636 276640	1	100,0%
636	276636 276640	1	100,0%
637	276636 276640	1	100,0%
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RAPID RECOMMENDATIONS

Arthroscopic surgery for degenerative knee arthritis and meniscal tears: a clinical practice guideline

Reed A C Siemieniuk,[1 2] Ian A Harris,[3 4] Thomas Agoritsas,[1 5] Rudolf W Poolman,[6] Romina Brignardello-Petersen,[1 7] Stijn Van de Velde,[8] Rachelle Buchbinder,[9 10] Martin Englund,[11] Lyubov Lytvyn,[12] Casey Quinlan,[13] Lise Helsingen,[14] Gunnar Knutsen,[15] Nina Rydland Olsen,[16] Helen Macdonald,[17] Louise Hailey,[18] Hazel M Wilson,[19] Anne Lydiatt,[20] Annette Kristiansen[21 22]

Full author details can be found at the end of the article

Correspondence to: R Siemieniuk
reed.siemieniuk@medportal.ca

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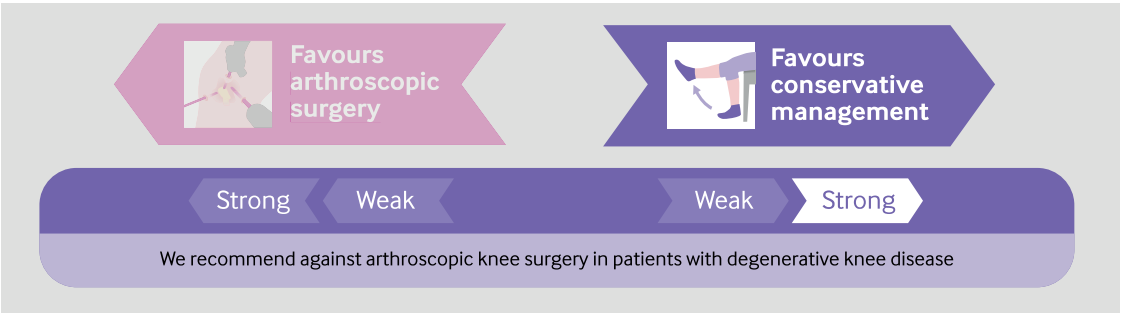
This BMJ Rapid Recommendation article is one of a series that provides clinicians with trustworthy recommendations for potentially practice changing evidence. BMJ Rapid Recommendations represent a collaborative effort between the MAGIC group (www.magicproject.org) and The BMJ. A summary is offered here and the full version including decision aids is on the MAGICapp (www.magicapp.org), for all devices in multilayered formats. Those reading and using these recommendations should consider individual patient circumstances, and their values and preferences and may want to use consultation decision aids in MAGICapp to facilitate shared decision making with patients. We encourage adaptation and contextualisation of our recommendations to local contexts. Those considering use or adaptation of content may go to MAGICapp to link or extract its content or contact The BMJ for permission to reuse content in this article.



What is the role of arthroscopic surgery in degenerative knee disease? An expert panel produced these recommendations based on a linked systematic review triggered by a randomised trial published in The BMJ in June 2016, which found that, among patients with a degenerative medial meniscus tear, knee arthroscopy was no better than exercise therapy. The panel make a strong recommendation against arthroscopy for degenerative knee disease. Box 1 shows all of the articles and evidence linked in this Rapid Recommendation package. The infographic provides an overview of the absolute benefits and harms of arthroscopy in standard GRADE format. Table 2 below shows any evidence that has emerged since the publication of this article.

Current practice

Approximately 25% of people older than 50 years experience knee pain from degenerative knee disease (box 2).[2 3] Management options include watchful waiting, weight loss if overweight, a variety of interventions led by physical therapists, exercise, oral or topical pain medications such as non-steroidal anti-inflammatory drugs, intra-articular corticosteroid and other injections, arthroscopic knee surgery, and knee replacement or osteotomy. The preferred combination or sequence of these options is not clear and probably varies between patients.

Knee replacement is the only definitive therapy, but it is reserved for patients with severe disease after non-operative management has been unsuccessful.[4 5] Some believe that arthroscopic debridement, including wash-out of intra-articular debris, with or without arthroscopic partial meniscectomy to remove damaged meniscus, may improve pain and function.

Current guidelines generally discourage arthroscopy for patients with clear radiographic evidence of osteoarthritis alone, but several support or do not make clear statements regarding arthroscopic surgery in other common groups of patients (table 1).

WHAT YOU NEED TO KNOW

- We make a strong recommendation against the use of arthroscopy in nearly all patients with degenerative knee disease, based on linked systematic reviews; further research is unlikely to alter this recommendation
- This recommendation applies to patients with or without imaging evidence of osteoarthritis, mechanical symptoms, or sudden symptom onset
- Healthcare administrators and funders may use the number of arthroscopies performed in patients with degenerative knee disease as an indicator of quality care.
- Knee arthroscopy is the most common orthopaedic procedure in countries with available data
- This Rapid Recommendation package was triggered by a randomised controlled trial published in *The BMJ* in June 2016 which found that, among patients with a degenerative medial meniscus tear, knee arthroscopy was no better than exercise therapy

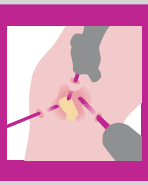
Population

People with degenerative knee disease

Including people with or without:

- Radiographic evidence of osteoarthritis
- Mild to severe osteoarthritis
- Mechanical symptoms
- Acute onset knee pain
- Meniscal tears

Choice of intervention



Arthroscopic surgery

Arthroscopic surgery with or without partial meniscectomy or debridement

or

Conservative management

Any conservative management strategy (exercise therapy, injections, drugs)

Recommendations

Favours arthroscopic surgery		Favours conservative management	
Strong	Weak	Weak	**Strong**

We recommend against arthroscopic knee surgery in patients with degenerative knee disease

Comparison of benefits and harms

Favours arthroscopic surgery | No important difference | Favours conservative management

	Mean score (0–100, high better)			Evidence quality
Long term benefits (1–2 years)				
Pain	21.9	No important difference	18.8	★★★★ High
Function	13.3	No important difference	10.1	★★★☆ Moderate
Short term benefits (<3 months)	Mean score (0–100, high better)			
Pain	20.4	**5.38 higher**	15.0	★★★★ High
Function	14.2	**4.94 higher**	9.3	★★★☆ Moderate
Short term harms (<3 months)	Events per 1000 people			
Venous thromboembolism	5	**5 fewer**	0	★★☆☆ Low
Infection	2	**2 fewer**	0	★★☆☆ Low

Key practical issues

Arthroscopic surgery	Conservative management
Performed by a surgeon, in an operating theatre	May be performed in hospital or the community
Recovery typically between 2 to 6 weeks	No recovery time
At least 1–2 weeks off work, depending on speed of recovery and physical demands of job	Time off work may be required for appointments, such as physiotherapy and injections

Interpreting the outcomes

The panel agreed "Minimally important difference" scores for pain and function, which represent what most patients would consider a worthwhile change:

Pain 12 | Function 8

Preferences and values

The panel believes that almost everyone would prefer to avoid the pain and inconvenience of the recovery period after arthroscopy, since it offers only a small chance of a small benefit

Resourcing

Arthroscopy is not cost-effective from a societal perspective

Box 1 | Linked articles in this *BMJ* Rapid Recommendations cluster

- Siemieniuk RAC, Harris IA, Agoritsas T, et al. Arthroscopic surgery for degenerative knee arthritis and meniscal tears: a clinical practice guideline. *BMJ* 2017;257:j1982. doi:10.1136/bmj.j1982
  Summary of the results from the Rapid Recommendation process
- Brignardello-Peterson R, Guyatt GH, Schandelmaier S, et al. Knee arthroscopy versus conservative management in patients with degenerative knee disease: a systematic review. *BMJ Open* 2017;7:e016114. doi:10.1136/bmjopen-2017-016114
  Review of all available randomised trials that assessed the benefits of knee arthroscopy compared with non-operative care and observational studies that assessed risks
- Devji T, Guyatt GH, Lytvyn L, et al. Application of minimal important differences in degenerative knee disease outcomes: a systematic review and case study to inform BMJ Rapid Recommendations. *BMJ Open* 2017;7:e015587. doi:10.1136/bmjopen-2016-015587
  Review addressing what level of individual change on a given scale is important to patients (minimally important difference). The study informed sensitivity analyses for the review on net benefit, informed discussions on patient values and preferences, and was key to interpreting the magnitude of effect sizes and the strength of the recommendation
- MAGICapp (www.magicapp.org)
  Expanded version of the results with multilayered recommendations, evidence summaries, and decision aids for use on all devices

Box 2 | What is degenerative knee disease?

- Degenerative knee disease is an inclusive term, which many consider synonymous with osteoarthritis. We use the term degenerative knee disease to explicitly include patients with knee pain, particularly if they are >35 years old, with or without:
  - Imaging evidence of osteoarthritis
  - Meniscus tears
  - Locking, clicking, or other mechanical symptoms except persistent objective locked knee
  - Acute or subacute onset of symptoms
- Most people with degenerative arthritis have at least one of these characteristics.[1] The term degenerative knee disease does not include patients having recent debut of their symptoms after a major knee trauma with acute onset of joint swelling (such as haemarthrosis)

Arthroscopic knee surgery for degenerative knee disease is the most common orthopaedic procedure in countries with available data[14] and on a global scale is performed more than two million times each year (fig 1).[15-18] Arthroscopic procedures for degenerative knee disease cost more than $3bn per year in the US alone.[19] A high prevalence of features advocated to respond positively to arthroscopic surgery (such as meniscal tears, mechanical symptoms, and sudden symptom onset) as well as financial incentives may explain why arthroscopic knee surgery continues to be so common despite recommendations against its use for osteoarthritis. Further, patients may be frustrated with their symptoms, having tried several less invasive management strategies by the time that they see the surgeon, and in many cases this may come with an expectation for surgical management. Moreover, many patients experience important and marked improvements after arthroscopy, which may be erroneously attributed to the effects of the procedure itself instead of the natural course of the disease, co-interventions, or placebo effects.

Table 1 | Support from current guidance for arthroscopic surgery in patients with subgroups of degenerative knee disease

	Lavage or debridement			Partial meniscectomy for meniscal tears	
	Patients with radiographic osteoarthritis	Patients without radiographic osteoarthritis	Patients with mechanical symptoms	Patients with evidence of osteoarthritis	Patients without evidence of osteoarthritis
AAOS[6]	Against	Supportive	Supportive	Supportive	Supportive
NICE[7 8]	Against	Against	For	No comment	No comment
ESSKSA[9]	Against	For	For	Against	For
BOA[10]*	Against	For	For	No comment	For
AOA[11]*	Against	No comment	No comment	Against	For
OARSI[12 13]	Against	No comment	No comment	Supportive	No comment

AAOS = American Academy of Orthopaedic Surgeons; NICE = National Institute of Health and Care Excellence; ESSKSA = European Society for Sports Traumatology, Knee Surgery and Arthroscopy; BOA = British Orthopaedic Association; AOA = Australian Orthopaedic Association; OARSI = Osteoarthritis Research Society International.
For = Explicit statement that arthroscopy should be performed in some patients.
Against = Explicit statement that arthroscopy should not be performed in some patients.
Supportive = Seemingly supportive of arthroscopy in some contexts.
*Official statement, not guidelines

The evidence

The panel requested two systematic reviews to inform the recommendation.[20 21]

The systematic review on the net benefit of knee arthroscopy compared with non-operative care pools data from 13 randomised trials for benefit outcomes (1668 patients) and an additional 12 observational studies for complications (>1.8 million patients).[21] Figure 2 gives an overview of the patients included, the study funding, and patient involvement in the design of the studies.

Panel members identified three outcomes—pain, function, and quality of life—as the most important for patients with degenerative knee disease who are considering surgery. Although the included studies reported these patient-important outcomes, it is difficult to know whether changes recorded on an instrument measuring subjective symptoms are important to those with symptoms—for example, a change of three points might have completely different meanings in two different pain scales.

Therefore, a second team performed a linked systematic review addressing what level of individual change on a given scale is important to patients,[20] a characteristic called the minimally important difference (MID).[22] The study identified a range of credible MIDs for each key outcome; this range of MID estimates informed sensitivity analyses for the review on net benefit, informed discussions on the patient values and preferences, and was key to interpreting the magnitude of effect sizes as well as the strength of the recommendation.[20]

Understanding the recommendations

The infographic provides an overview of the benefits and harms of arthroscopy in standard GRADE format.

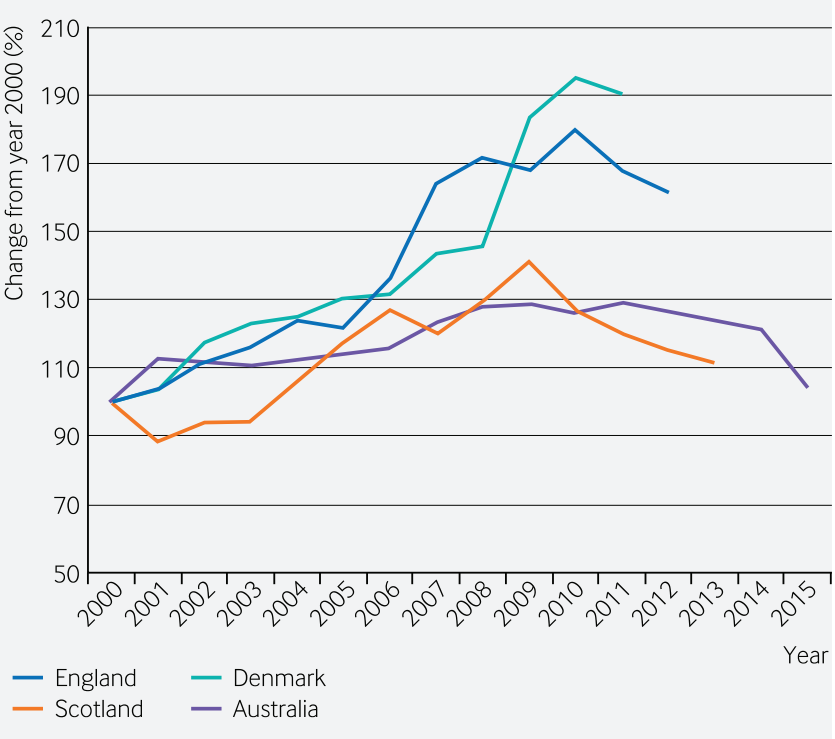


Fig 1 | Population adjusted trends in frequency of knee arthroscopy; percent. Arthroscopic knee surgery remains common despite accumulating evidence suggesting little benefit

Estimates of baseline risk for effects comes from the control arms of the trials; for complications, comparator risk was assumed to be nil.

The panel is confident that arthroscopic knee surgery does not, on average, result in an improvement in long term pain or function. Most patients will experience an important improvement in pain and function without arthroscopy. However, in <15% of participants, arthroscopic surgery resulted in a small or very small improvement in pain or function at three months after surgery—this benefit was not sustained at one year. In addition to the burden of undergoing knee arthroscopy (see practical issues below), there are rare but important harms, although the precision in these estimates is uncertain (low quality of evidence).

It is unlikely that new information will change interpretation of the key outcomes of pain, knee function, and quality of life (as implied by high to moderate quality of evidence).

The panel is confident that the randomised controlled trials included adequate representation from groups commonly cited to derive benefit from arthroscopic knee surgery for degenerative knee disease—notably those with meniscal tears, no or minimal radiographic evidence of osteoarthritis, and those with sudden but non-traumatic symptom onset. Thus the recommendation applies to all or almost all patients with degenerative knee disease. Further, the evidence applies to patients with any severity of mechanical symptoms, with the only possible exception being those who are objectively unable to fully extend their knee (that is, a true locked knee). We did not consider young patients with sports related injuries or patients with major trauma in any age.

Trials that enrolled a majority of patients without radiographic osteoarthritis showed similar effect sizes to trials enrolling patients with radiographic evidence of osteoarthritis. Most of these trials exclusively included patients

HOW THE RECOMMENDATION WAS CREATED

A randomised controlled trial published in *The BMJ* in June 2016 found that, among patients with a degenerative medial meniscus tear, knee arthroscopy was no better than exercise therapy.[32] This study adds to the body of evidence suggesting that the benefits of arthroscopy may not outweigh the burden and risks.[33 34] The *RapidRecs* executive felt that the study, when considered in context of the full body of evidence, might change practice.[35]

Our international panel including orthopaedic surgeons, a rheumatologist, physiotherapists, a general practitioner, general internists, epidemiologists, methodologists, and people with lived experience of degenerative knee disease (including those who had undergone and those who had not undergone arthroscopy) met to discuss the evidence. No person had financial conflicts of interest; intellectual and professional conflicts were minimised and managed (see appendix 1 on bmj.com).

The panel followed the *BMJ* Rapid Recommendations procedures for creating a trustworthy recommendation[35 36] and used the GRADE approach to critically appraise the evidence and create recommendations (appendix 2).[37] The panel considered the balance of benefits, harms, and burdens of the procedure, the quality of evidence for each outcome, typical and expected variations in patient values and preferences, and acceptability. Recommendations can be strong or weak, for or against a course of action.

HOW PATIENTS WERE INVOLVED IN THE CREATION OF THIS ARTICLE

Three people with lived experience of osteoarthritis, one of whom had arthroscopic knee surgery, were full panel members. These panel members identified important outcomes and led the discussion on values and preferences. Pain was weighed as higher importance for most patients: for example, the patient panel members felt that a possible small benefit to function without a reduction in pain would be unimportant to almost all patients. Those with lived experience identified key practical issues including concerns with cost and accessibility for both arthroscopy and interventions provided by physiotherapists. The members participated in the teleconferences and email discussions and met all authorship criteria.

EDUCATION INTO PRACTICE

- Project: how many arthroscopic procedures are scheduled in your organisation for degenerative knee disease?
- Based on the information you have read in this article or in this package of Rapid Recommendation articles, is there anything which you might alter your practice?
- To what extent might you use information in this article to alter the conversations you have with patients with degenerative knee disease, or those considering arthroscopic surgery?

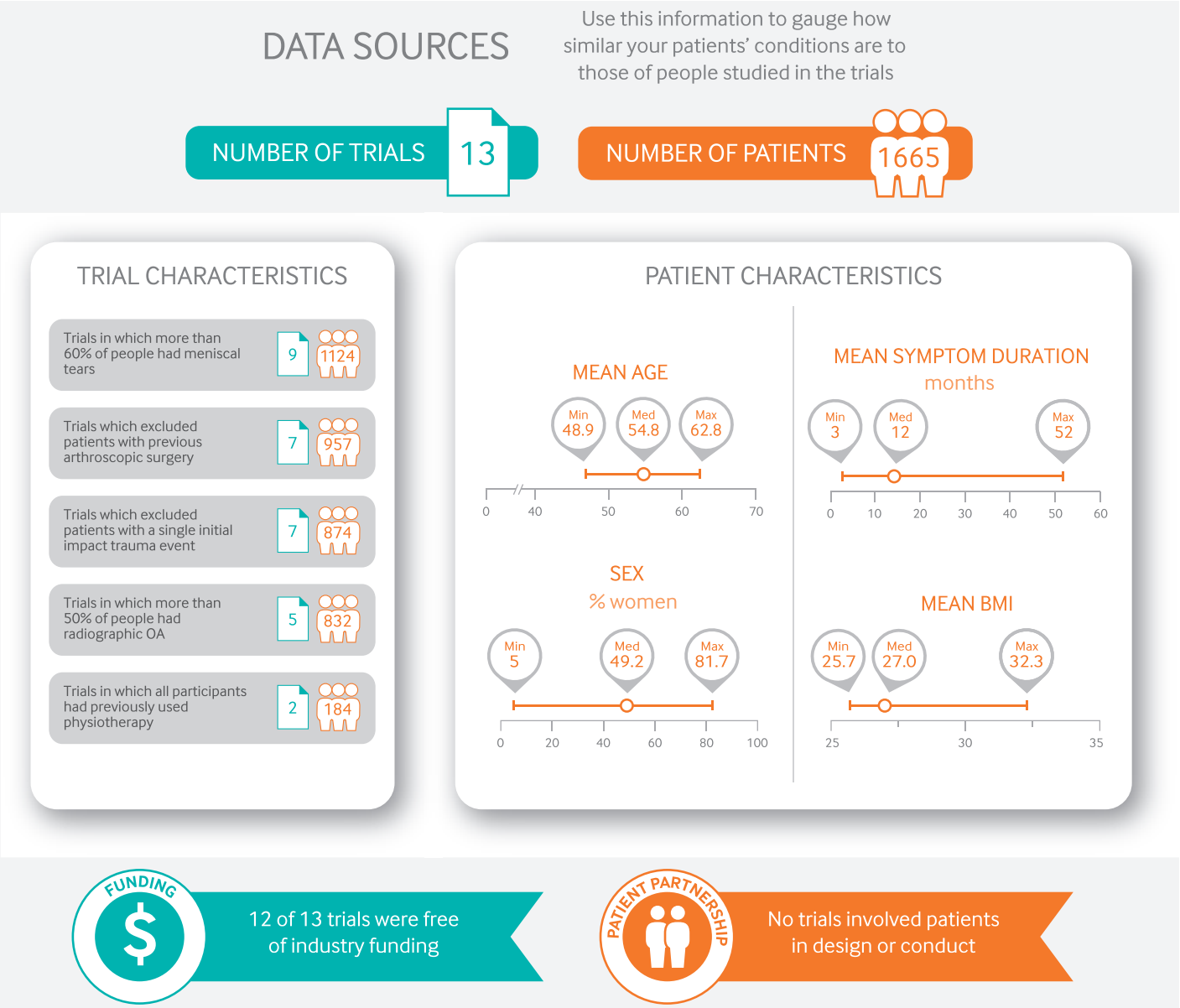


Fig 2| Characteristics of patients and trials included in systematic review of arthroscopic knee surgery

with meniscus tears. Meniscus tears are common, usually incidental findings, and unlikely to be the cause of knee pain, aching, or stiffness.[1] Mechanical symptoms were also a prominent feature for most trial participants, and many had sudden or subacute onset of symptoms.[23-26] Given that there is evidence of harm and no evidence of important lasting benefit in any subgroup, the panel believes that the burden of proof rests with those who suggest benefit for any other particular subgroup before arthroscopic surgery is routinely performed in any subgroup of patients.

Practical issues

It takes between two and six weeks to recover from arthroscopy, during which time patients may experience pain, swelling, and limited function.[27 28] Most patients cannot bear full weight on the leg (that is, they may need crutches) in the first week after surgery, and driving or physical activity is limited during the recovery period.[27]Figure 3 outlines the key practical issues for those considering arthroscopic knee surgery versus non-surgical management for degenerative knee disease.

Degenerative knee disease is a chronic condition in which symptoms fluctuate. On average, pain tends to improve over time after seeing a physician for pain,[21 29] and delaying knee replacement is encouraged when possible.[4]

Values and preferences

Our strong recommendation against arthroscopy reflects a low value on a modest probability (<15%) of small or very small improvement in short term pain and function that does not persist to one year, and a higher value on avoiding the burden, postoperative limitations, and rare serious adverse effects associated with knee arthroscopy. The panel, including the patient participants, felt that

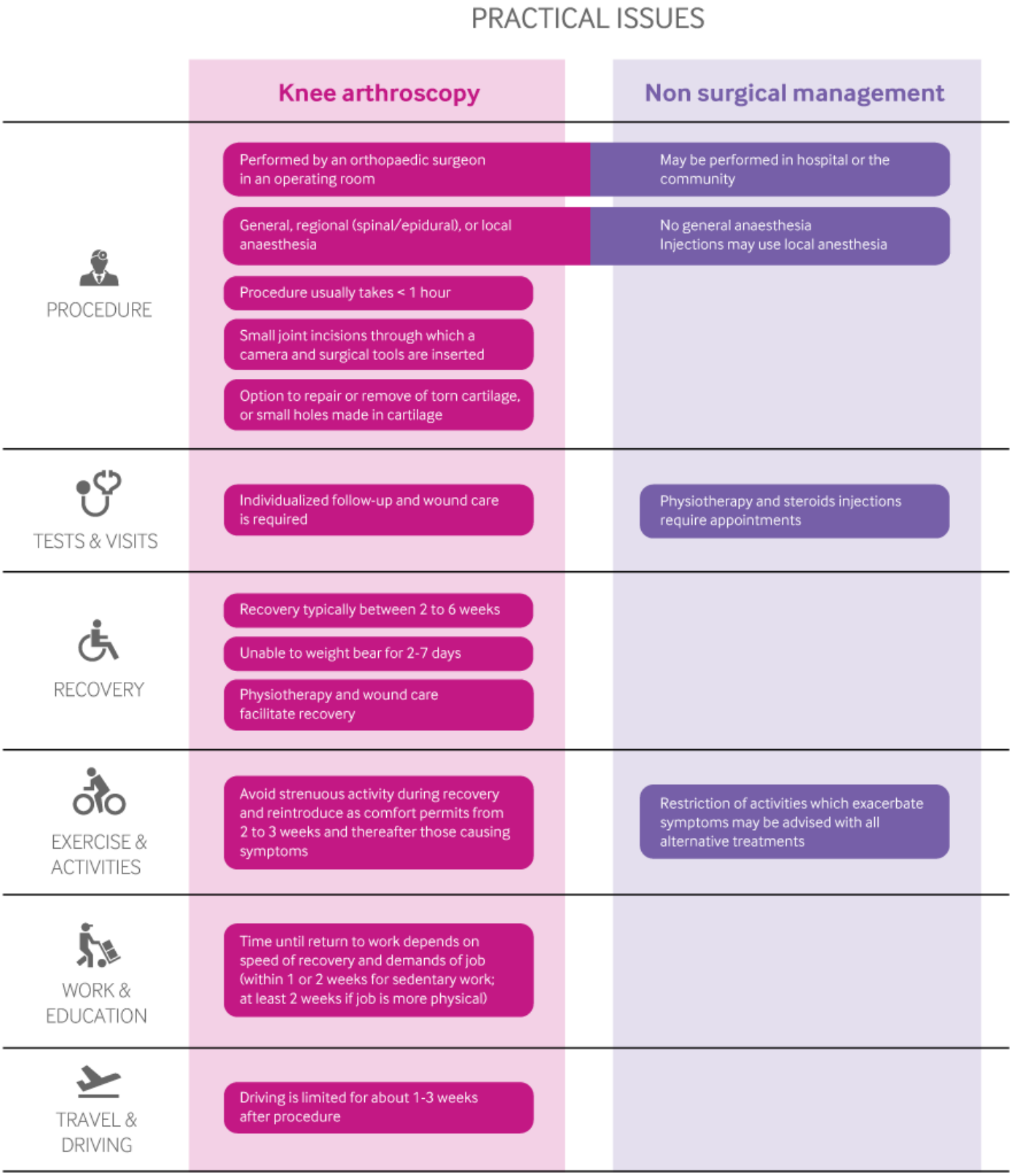


Fig 3| Practical issues about use of arthroscopic knee surgery versus non-surgical management for degenerative knee disease

Table 2 | New evidence which has emerged after initial publication

Date	New evidence	Citation	Findings	Implications for recommendation(s)
There are currently no updates to the article				

almost all patients would share these values. The recommendation is not applicable to patients who do not share these values (that is, those who place a high value on a small, uncertain, and transient reduction in pain and function, and a low value on avoiding the burden and postoperative limitation associated with arthroscopy).

Costs and resources

The panel focused on the patient perspective rather than that of society when formulating the recommendation. However, implementation of this recommendation will almost certainly result in considerable cost savings for health funders. A rigorous economic analysis found that knee arthroscopy for degenerative knee disease is not close to cost effective by traditional standards, even in extreme scenarios that assume a benefit with arthroscopy.[30] The panel made a strong recommendation against arthroscopy, which applies to almost all patients with degenerative knee disease, implying that non-use of knee arthroscopy can be used as a performance measure or tied to health funding.[31]

Future research

Key research questions to inform decision makers and future guidelines are:

- Randomised trials—Does arthroscopic knee surgery benefit patients who are objectively unable to fully extend their knee or who have persistent, severe, and frequent mechanical symptoms?
- Implementation studies—What are the most effective ways to reduce the overuse of arthroscopic surgery for degenerative knee disease?

Updates to this article

Table 2 shows evidence which has emerged since the publication of this article. As new evidence is published, a group will assess the new evidence and make a judgment on to what extent it is expected to alter the recommendation.

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Competing interests: All authors have completed the *BMJ* Rapid Recommendations interests disclosure form, and a detailed, contextualised description of all disclosures is reported in appendix 1. As with all *BMJ* Rapid Recommendations, the executive team and *The BMJ* judged that no panel member had any financial conflict of interest. Professional and academic interests are minimised as much as possible, while maintaining necessary expertise on the panel to make fully informed decisions.

Transparency: R Siemieniuk affirms that the manuscript is an honest, accurate, and transparent account of the recommendation being reported; that no important aspects of the recommendation have been omitted; and that any discrepancies from the recommendation as planned (and, if relevant, registered) have been explained.

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Web extras on bmj.com

Appendix 1: Full list of authors' declarations of interests

Appendix 2: Methodology for development of *BMJ* Rapid Recommendations

Appendix 3: All electronic multilayered information available on the MAGICapp'

[1]Department of Health Research Methods, Evidence, and Impact, McMaster University, Hamilton, Ontario, Canada L8S 4L8
[2]Department of Medicine, University of Toronto, Toronto, Ontario, Canada
[3]South Western Sydney Clinical School, UNSW, Australia
[4]Whitlam Orthopaedic Research Centre, Ingham Institute for Applied Medical Research, Liverpool, NSW 2170, Australia
[5]Division General Internal Medicine & Division of Clinical Epidemiology, University Hospitals of Geneva, CH-1211, Geneva, Switzerland
[6]Department of Orthopaedic Surgery, Joint Research, OLVG, 1090 HM Amsterdam, The Netherlands
[7]Faculty of Dentistry, Universidad de Chile, Independencia, Santiago, Chile
[8]Norwegian Institute of Public Health, Nydalen, N-0403 Oslo, Norway
[9]Department of Epidemiology and Preventive Medicine, School of Public Health & Preventive Medicine, Monash University, Melbourne, Vic 3004, Australia
[10]Monash Department of Clinical Epidemiology, Cabrini Institute; Suite 41 Cabrini Medical Centre, Malvern Vic, 3144, Australia
[11]Clinical Epidemiology Unit, Orthopaedics, Department of Clinical Sciences Lund Faculty of Medicine, Lund University, SE-221 85 Lund, Sweden
[12]Oslo University Hospital, Blindern 0317 Oslo, Norway
[13]Richmond, Virginia, USA
[14]Clinical Effectiveness Research Group, Institute of Health and Society, University of Oslo, Blindern 0317 Oslo, Norway
[15]University Hospital North Norway, 9038 Tromso, Norway
[16]Department of Occupational Therapy, Physiotherapy and Radiography, Faculty of Health and Social sciences, Bergen University College, 5020 Bergen, Norway
[17]BMJ Editorial, BMA House, London WC1H 9JR, UK
[18]Nuffield Orthopaedic Centre, Oxford University Hospitals NHS Foundation Trust, Oxford OX3 7HE, UK
[19]London, Ontario, Canada
[20]Ingersoll, Ontario, Canada N5C 3N1
[21]Department of Health and Science, University of Oslo, Oslo, Norway
[22]Department of Medicine, Hospital Innlandet Trust, Gjøvik, Norway

Artroscopie van de knie

Deze richtlijn is tot stand gekomen op initiatief van Nederlandse Orthopaedische Vereniging

Inhoudsopgave

Startpagina - Artroscopie van de knie

Waar gaat deze richtlijn over?
Deze richtlijn richt zich op wat volgens de huidige maatstaven de beste zorg is voor patiënten die een artroscopie van de knie en een artroscopische behandeling van de knie moeten ondergaan. In de richtlijn komen de volgende onderwerpen aan de orde:

- De diagnostiek van knieletsels en de plaats van MRI daarin
- Artroscopische behandeling van verschillende knieletsels
- De zorg na een artroscopische knieoperatie

Voor wie is deze richtlijn bedoeld?
Deze richtlijn is geschreven voor alle leden van de beroepsgroepen van orthopaedisch chirurgen, sportartsen, fysiotherapeuten, radiologen en traumachirurgen die betrokken zijn bij de zorg voor patiënten met (acute) knieletsels. Daarnaast is deze richtlijn bedoeld om zorgverleners die anderzijds betrokken zijn bij deze patiënten, te informeren, waaronder kinderartsen, revalidatieartsen, huisartsen, physician assistants en verpleegkundig specialisten.

Voor patiënten
Een artroscopie van de knie is een kijkoperatie in de knie. De chirurg bekijkt met een speciaal kijkapparaat (artroscoop) de binnenkant van het kniegewricht. Bij sommige knieklachten kan de arts met lichamelijk onderzoek of röntgenfoto's niet goed vaststellen wat er precies aan de hand is. Met een artroscopie kan hij beter zien wat er mis is en de klachten vaak ook direct met de artroscoop behandelen. Van iedere 1000 mensen die bij een huisarts komen, hebben er 14 knieklachten. Bij 2 van de 1000 patiënten is dit een acute beschadiging van de kniebanden of de meniscus. De meeste knieletsels ontstaan bij het sporten en andere vrijetijdsbesteding.

Bij aanverwante informatie staat een link naar patiënteninformatie van de orthopedisch chirurgen. Meer informatie over knieproblemen is te vinden op Thuisarts: http://thuisarts.nl/knieproblemen

Hoe is de richtlijn tot stand gekomen?
Het initiatief voor deze richtlijn is afkomstig van de Nederlandse Orthopaedische Vereniging (NOV). De richtlijn is herzien door een multidisciplinaire commissie met vertegenwoordigers vanuit de orthopedisch chirurgen, traumachirurgen, sportartsen, radiologen en fysiotherapeuten.

Bij deze richtlijn is een stroomschema ontwikkeld. Dit stroomschema beschrijft de behandeling van een meniscusletsel.

Artroscopische behandeling van knieklachten

Deze module bevat acht submodules waarin de volgende uitgangsvragen worden behandeld:

1. Welke meniscusletsels moeten behandeld worden, wanneer en hoe?
2. Wat is de waarde van artroscopie na een patellaluxatie?
3. Wat is de waarde van artroscopie bij osteochondrale fracturen?
4. Wat is de waarde van artroscopie bij patellofemoraal pijnsyndroom?
5. Wat is de waarde van artroscopie bij artrose van de knie?
6. Wat is de waarde van artroscopie bij acute bandletsels van de knie?
7. Wat is de waarde van artroscopie bij een bacteriële artritis van de knie?
8. Wat is de waarde van artroscopie bij tibiaplateaufracturen?

Verantwoording

Laatst beoordeeld : 04-03-2019
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Voor de volledige verantwoording, evidence tabellen en eventuele aanverwante producten raadpleegt u de Richtlijnendatabase.

Behandeling meniscusletsels

Uitgangsvraag

Welke meniscusletsels moeten behandeld worden, wanneer en hoe?

Aanbeveling

Acute meniscusletsel
Verricht een artroscopie binnen 2 weken bij een bewegingsbeperking van de knie met als meest waarschijnlijke oorzaak een gescheurde meniscus.

Overweeg altijd de meniscus te hechten dan wel een afwachtend beleid te volgen. Een meniscusletsel betekent niet noodzakelijkerwijs meniscectomie.

Laat de perifere rand van de meniscus intact.

Probeer altijd een meniscusscheur bij jonge patiënten te hechten indien de scheur zich bevindt in het doorbloede gedeelte van de meniscus. Hierbij is een stabiele knie, dan wel een instabiele knie die binnen zes weken gestabiliseerd wordt, onontbeerlijk.

Degeneratieve meniscusletsel
Start met conservatieve behandeling bij degeneratieve meniscusletsel.

Overweeg ten minste voor een duur van drie maanden niet-operatief te behandelen in geval van een meniscusscheur.

Overwegingen

De werkgroep is van mening dat studies van meer dan acht jaar oud, waarin totale meniscectomie met partiële meniscectomie vergeleken worden, niet meer relevant zijn, omdat de standaardzorg in de afgelopen jaren veranderd is. De voorkeur is nu om, indien mogelijk, een meniscus te hechten en anders een artroscopische partiële meniscectomie uit te voeren. Xu (2013) ondernam een meta-analyse naar de vergelijking tussen het hechten van een meniscus en een meniscectomie met betere uitkomsten voor het hechten van de meniscus. Er is op dit moment onvoldoende wetenschappelijke onderbouwing om vast te kunnen stellen wanneer en welke meniscusletsels gehecht of verwijderd moeten worden om optimale uitkomsten op korte en langere termijn te verkrijgen. Echter, het lijkt verstandiger om bij jongere patiënten met een lateraal meniscusletsel laagdrempelig te hechten dan een partiële meniscectomie te verrichten vanwege de lange termijn resultaten na laterale meniscectomie (Hulet, 2015).

De meeste studies hanteerden 3 maanden als de ‘short-term follow-up’. In de eerste periode van 3 maanden was er na een operatieve ingreep en niet-operatieve behandeling een vermindering van de klachten zichtbaar en leek het verschil in effect van behandeling tussen beide groepen minimaal. Dit minimale verschil blijft

bestaan tot aan 24 maanden. In geval van niet-obstructieve meniscus klachten heeft een conservatieve behandeling daarom de voorkeur boven een operatieve ingreep in tenminste de eerste 3 maanden na presentatie.

De werkgroep acht menisci hechtbaar wanneer ze capsulogeen zijn losgescheurd, er sprake is van een perifere lengtescheur in het zogenaamde rood–rode gedeelte en wanneer het gescheurde meniscusgedeelte van goede kwaliteit is. Het betreft meestal traumatische meniscusscheuren. Ook spontane genezing van meniscusletsel is uitgebreid beschreven zowel in combinatie met een voorste kruisbandruptuur als bij geïsoleerde meniscusletsels. De werkgroep is van mening dat wanneer er geen bewegingsbeperking in de knie is, terwijl er op een MRI een bewezen perifere lengtescheur van de meniscus aanwezig is, er een afwachtend beleid kan worden gevoerd. Vanwege de kans op spontane genezing kan overbehandeling het gevolg zijn.

De revalidatie na het hechten van een meniscus duurt langer. Er is geen evidence-based nabehandelingsprotocol beschikbaar, maar over het algemeen wordt geadviseerd om gedurende 4 tot 6 weken partieel te belasten en de flexie tot 90 graden te beperken. Terugkeer op sportniveau wordt geadviseerd na 3 tot 6 maanden. Met een topsporter dient de nabehandeling nadrukkelijk besproken te worden zodat er een goed doordacht besluit kan worden genomen ten aanzien van hechten of partiële meniscectomie.

Onderbouwing

Achtergrond

Meniscus injuries are among the most common lesions in orthopedic practice. Approximately 30,000 meniscus operations per year are carried out in the Netherlands. According to the “Centraal Bureau voor de Statistiek” (CBS) half of the patients is older than 45 years old with increased risk of osteoarthritis. There is literature that suggests acceleration of the development of arthritis as a result of an arthroscopy in a degenerative knee (Rongen, 2017). The 2016 ESSKA meniscus consensus about the surgical management of degenerative meniscus lesions also states the following: “The main finding of this first European consensus in the treatment of patients with a symptomatic knee and a degenerative meniscus lesion was that arthroscopic partial meniscectomy should not be proposed as a first-line treatment.” However, this consensus is not a result of a systematic review but a presentation of a literature review combined with the interpretation of experts in the field.
The question remains which meniscal lesions should be treated surgically and whether this treatment should then consist of removing or suturing the damaged meniscus.

Conclusies

Pain (short and long-term benefits)

High GRADE	Knee arthroscopy did not result in an extra reduction in pain scores in the short or long-term when compared with conservative management in patients with degenerative knee disease. *References (Brignardello-Petersen, 2017)*

Function (short and long-term benefits)

Moderate GRADE	Knee arthroscopy did not result in an improvement in function in the short or long-term when compared with conservative management in patients with degenerative knee disease. *References (Brignardello-Petersen, 2017)*

Complications: venous thromboembolism

Low GRADE	Arthroscopy may have a small risk of venous thromboembolism compared with conservative management in patients with degenerative knee disease. *References (Brignardello-Petersen, 2017)*

Complications: infection

Low GRADE	Arthroscopy may have a very small risk of infection compared with conservative management in patients with degenerative knee disease. *References (Brignardello-Petersen, 2017)*

Samenvatting literatuur

Patients with an (acute) traumatic meniscus injury
No studies were included as none of the studies met the selection criteria.

Patients with a degenerative meniscal tear
Brignardello-Petersen (2017) set out to determine the effects and complications of arthroscopic surgery compared with conservative management strategies in patients with degenerative knee disease. The authors performed a literature search by searching MEDLINE (Pubmed), EMBASE (Ovid) and Cochrane Central Register of Controlled Trials (CENTRAL) till 16 august 2016. A total of 13 RCTs were included to inform the effects of knee arthroscopy and 15 studies (12 observational studies and three RCTs) provided data on the complications of knee arthroscopy.

Results

1. Pain

Short-term benefits (<3 months) were reported in 10 RCTs. The pooled difference in change from baseline was on average 5.4 (95%CI: 1.9 to 8.8). Long-term benefits (1 to 2 years) were reported in 8 RCTs. The pooled difference in change from baseline was on average 3.1 (95%CI: 0.2 to 6.4). The benefits of arthroscopy in pain scores, both short and long-term, were no different from conservative treatment in patients with degenerative knee disease.

2. Function

Short-term data on function was available in 7 studies and long-term data in 6 studies. The mean score difference from baseline in function after three months was 4.9 (95%CI: 1.5 to 8.4) in favor of arthroscopy and after 1 to 2 years 3.16 (95%CI: 0.48 to 6.8).

3. Complications

In line with the rapid recommendation, the working group chose to report the outcomes venous thromboembolism (VTE) and infections as potential complications.

The difference in proportion of patients with a VTE between arthroscopy versus conservative management was 5 per 1000 patients (95%CI: 2 to 10). Arthroscopy may have a small risk for VTE.

For infections, the difference between arthroscopy versus conservative management was 2 per 1000 patients (95%CI: 1 to 4). Arthroscopy may have a very small risk for infection.

Level of evidence of the literature

There are four levels of evidence: high, moderate, low, and very low. RCTs start at a high level of evidence.

Pain: The level of evidence for the outcome pain (both short and long-term) was not downgraded. Although risk of bias due to lack of blinding was a concern in most trials, trials with a low risk of bias reported similar results to those in which there were risk of bias concerns.

Function: The level of evidence for the outcome function (both short and long-term) was downgraded with one level due to serious risk of bias and borderline imprecision.

Complications: The level of evidence for the outcomes VTE and infections were both downgraded with two levels due to serious risk of bias (data was used not collected for the study) and serious inconsistency. There was no evidence of publication bias.

Zoeken en selecteren

A systematic review of the literature was performed to answer the following question:
What are the beneficial or harmful effects of arthroscopy (among which lateral and medial meniscectomy) compared with conservative treatment in patients with an (acute) meniscal tear?

PICO 1

P: patients with an (acute) traumatic meniscal tear;
I: arthroscopy (among which lateral and medial meniscectomy);
C: conservative treatment (Any therapy: exercise therapy, injections, drugs);
O: pain (VAS, NRS), self-reported knee function (Lysholm, KOOS, IKDC (subjective)), complications (venous thromboembolism, infection).

PICO 2

P: patients with a degenerative meniscal tear/ People with degenerative knee disease (radiographical evidence of osteoarthritis, mild to severe osteoarthritis, mechanical symptoms, acute onset knee pain, meniscal tears);
I: arthroscopic surgery (with or without partial meniscectomy or debridement);
C: conservative treatment (Any therapy: exercise therapy, injections, drugs);

O: Pain (VAS, NRS), self-reported knee function (Lysholm, KOOS, IKDC (subjective)), complications (venous thromboembolism, infection).

Relevant outcome measures
The working group considered pain and self-reported knee function critical outcome measures for decision making and function an important outcome measure for decision making.

Per outcome measure
The working group used a systematic review by Devji (2017) in which they set out to identify the most credible anchor-based minimal important differences (MIDs) for patient important outcomes in patients with degenerative knee disease.

Pain: An absolute median MID for pain measured with either a WOMAC or KOOS questionnaire was set to 12.

Function: An absolute median MID for function measured with either a KOOS questionnaire was set to 13.

Search and select (Methods)
The databases Medline (via OVID) and Embase (via Embase.com) were searched with relevant search terms. For the update, the databases were searched from the previous search date 2009 till December 18, 2017. The detailed search strategy is depicted under the tab Methods. The updated systematic literature search resulted in 334 hits. Studies were selected based on the following criteria: systematic reviews and randomized controlled trials (RCTs) that compared arthroscopy with conservative treatment in patients with a meniscal tear (irrespective of whether it was a traumatic or degenerative tear). One or more of the following outcomes had to be studied: pain, self-reported knee function or complications. Self-reported knee function had to have been measured with either the KOOS, Lysholm or IKDC questionnaire. In addition, studies with patients aged ≥16 years were eligible for inclusion.

Fourteen articles were initially selected based on title and abstract. After reading the full text, 13 articles were excluded (see the table with reasons for exclusion under the tab Methods), and one article was included. This article was a rapid recommendations paper on arthroscopic surgery for degenerative knee arthritis and meniscal tears. A systematic review by Brignardello-Petersen (2017) was used to report data on relevant outcomes. This systematic review was described in the summary of literature.

New versus old (2010)
(acute) traumatic meniscus injury
The previously described studies consisted of a case series, a guideline and a study which compared patients with an injury who received an operation versus patients without an injury or operation of the knee. These studies did not meet the selection criteria, because of wrong study design or wrong comparison.

Degenerative meniscus injury
In the updated literature search, a systematic review was found. This review included the previously described RCT from Herrlin (2007). Therefore, the old description of the literature became redounded.

Verantwoording

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Voor de volledige verantwoording, evidence tabellen en eventuele aanverwante producten raadpleegt u de Richtlijnendatabase.

Referenties

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KNEE

Surgical management of degenerative meniscus lesions: the 2016 ESSKA meniscus consensus

Ph Beaufils[1] · R. Becker[2] · S. Kopf[3] · M. Englund[4] · R. Verdonk[5] · M. Ollivier[1] · R. Seil[6,7]

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Abstract
Purpose A degenerative meniscus lesion is a slowly developing process typically involving a horizontal cleavage in a middle-aged or older person. When the knee is symptomatic, arthroscopic partial meniscectomy has been practised for a long time with many case series reporting improved patient outcomes. Since 2002, several randomised clinical trials demonstrated no additional benefit of arthroscopic partial meniscectomy compared to non-operative treatment, sham surgery or sham arthroscopic partial meniscectomy. These results introduced controversy in the medical community and made clinical decision-making challenging in the daily clinical practice. To facilitate the clinical decision-making process, a consensus was developed. This initiative was endorsed by ESSKA.
Methods A degenerative meniscus lesion was defined as a lesion occurring without any history of significant acute trauma in a patient older than 35 years. Congenital lesions, traumatic meniscus tears and degenerative lesions occurring in young patients, especially in athletes, were excluded. The project followed the so-called formal consensus process, involving a steering group, a rating group and a peer-review group. A total of 84 surgeons and scientists from 22 European countries were included in the process. Twenty questions, their associated answers and an algorithm based on extensive literature review and clinical expertise, were proposed. Each question and answer set was graded according to the scientific level of the corresponding literature.
Results The main finding was that arthroscopic partial meniscectomy should not be proposed as a first line of treatment for degenerative meniscus lesions. Arthroscopic partial meniscectomy should only be considered after a proper standardised clinical and radiological evaluation and when the response to non-operative management has not been satisfactory. Magnetic resonance imaging of the knee is typically not indicated in the first-line work-up, but knee radiography should be used as an imaging tool to support a diagnosis of osteoarthritis or to detect certain rare pathologies, such as tumours or fractures of the knee.
Discussion The present work offers a clear framework for the management of degenerative meniscus lesions, with the aim to balance information extracted from the scientific evidence and clinical expertise. Because of biases and weaknesses of the current literature and lack of definition of important criteria such as mechanical symptoms, it cannot be considered as an exact treatment algorithm. It summarises the results of the "ESSKA Meniscus Consensus

✉ R. Seil
seil.romain@chl.lu

Ph Beaufils
pbeaufils@ch-versailles.fr

[1] Orthopaedics Department, Centre Hospitalier de Versailles, 78150 Le Chesnay, France

[2] Department of Orthopaedics and Traumatology, Hospital Brandenburg, Medical School Theodor Fontane, Hochstrasse 26, 14770 Brandenburg, Havel, Germany

[3] Center for Musculosketal Surgery, Charité - University Medicine Berlin, AugustenburgerPlatz 1, 13353 Berlin, Germany

[4] Orthopaedics, Clinical Epidemiology Unit, Department of Clinical Sciences Lund, Faculty of Medicine, Lund University, Klinikgatan 22, 221 85 Lund, Sweden

[5] Universiteit Gent, De Pintelaan 185, 9000 Ghent, Belgium

[6] Département de l'Appareil Locomoteur, Centre Hospitalier de Luxembourg - Clinique d' Eich, 78, Rue d'Eich, 1460 Luxembourg, Germany

[7] Sports Medicine Research Laboratory, Luxembourg Institute of Health, 78, Rue d'Eich, 1460 Luxembourg, Germany

Project" (http://www.esska.org/education/projects) and is the first official European consensus on this topic. The consensus may be updated and refined as more high-quality evidence emerges.
Level of evidence I.

Keywords Meniscus · Degenerative Lesion · Arthroscopic partial meniscectomy · Management · Consensus

Introduction

Degenerative meniscus lesions (DMLs) develop slowly and typically involve a horizontal cleavage of the meniscus in middle-aged or older persons. They are frequent in the general population, and their prevalence increases with age, ranging from 16% in knees of 50–59 year-old women to over 50% in men aged 70–90 years [10]. Magnetic resonance imaging (MRI) will typically identify a linear intrameniscus signal [18], often communicating with the articular surface. This hypersignal is reported to be the result of ongoing mucoid degenerative changes. Such a DML can be considered as an ageing or degenerative process. Although there is a clear correlation between knee osteoarthritis and meniscus degeneration, it is sometimes difficult to establish a clear line of distinction between these two entities.

Arthroscopic partial meniscectomy (APM) is one of the most popular orthopaedic procedures, especially for DMLs, and its incidence has been growing in several countries [1, 26]. Post-operative improvement has been reported, even for patients with a DML [6], but some complications or failures have also been witnessed [21], and the high risk of osteoarthritis after APM remains a concern [27]. Since 2002, the majority of randomised controlled trials (RCTs) dealing with the treatment of DMLs [except Gauffin et al. 11] demonstrated no additional benefit of APM compared to non-operative treatment or sham surgery/sham APM at a short- and mid-term follow-up [13, 14, 16, 17, 19, 24, 30]. However, there is a considerable gap between clinical reality and the conclusions of these studies promoting non-operative treatment to be used as the first line of treatment in the daily clinical practice. In Denmark, for instance, the overall annual incidence of surgical meniscus procedures per 100,000 persons has doubled from 164 in 2000 to 312 in 2011. A twofold increase was found for patients aged between 35 and 55 years and a threefold increase for those older than 55 years [26]. This corresponds approximately to the same period in which the above-mentioned RCTs have been published.

Given the complex clinical reality, running RCTs can give rise to bias [7, 8]. For example, patients starting out with a conservative treatment for a DML sometimes require surgery before the planned follow-up period is over. Such a change of the study makes the interpretation of the results complex and may weaken the conclusion of an RCT, despite its stronger methodological design in comparison to studies with a lower level of evidence. Nevertheless, these RCTs exist, and despite their weaknesses, they give an important message. Well-performed RCTs provide a higher level of evidence than case series or clinical impressions. The latter, for example, ignore placebo and other contextual effects always explain a variable proportion of the treatment outcomes. Bearing this in mind, the treatment of a patient with a symptomatic knee and a DML should be related both to scientific evidence and clinical expertise.

The publication of the above-mentioned RCTs introduced a big controversy in the medical community. This was emphasised by B. Reider in his editorial entitled "To cut…or not to cut" [20]: "it is not surprising that we orthopaedic surgeons like doing orthopaedic surgery…but as ethical physicians, we only want to do so when it is the best interest of our patients". In this debate, several editorials and letters have been published [5, 9, 28]. These controversial exchanges have not always been useful to the clinician in his/her decision-making process concerning patients with a symptomatic knee and a DML. Therefore, there is a need for a more uniform and clear consensus. This has been underlined in a recent editorial in the KSSTA journal where we stated that "the necessity of a consensual process becomes clear, founded on the independence of the organisers and with the participation of all interested parties … Work of this kind will permit a probable reduction in the number of arthroscopic meniscal resections in our countries in favour of abstention and an improved nosological definition of "meniscectomy", rendering it pertinent and efficient" [4].

In order to assist surgeons in their treatment indications, ESSKA has, therefore, decided to initiate a European Meniscus Consensus Project. The first part, presented here, is devoted to DMLs. The complete report of the project can be found on the Society's website (http://www.esska.org/education/projects). The reader is cautioned that this is not a systematic literature review on the topic of DML. In addition, this project should be considered as a "framework" rather than "strict guidelines". Its goal was to provide a reference frame for the management of DMLs, based both on scientific literature and balanced expert opinion.

Methods

In this consensus project, a DML was defined as a meniscus lesion occurring without a history of a knee trauma in a patient older than 35 years. Congenital lesions, traumatic

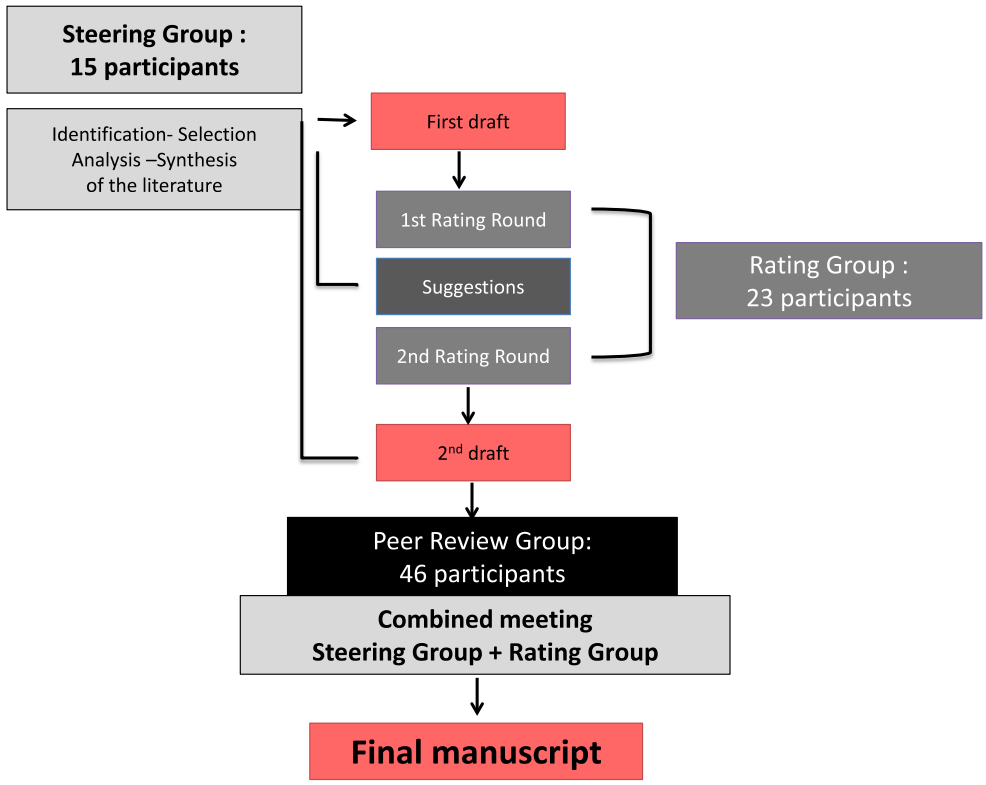

Fig. 1 Formal Consensus Project

meniscus tears and degenerative lesions occurring in young patients, especially in athletes, were excluded. The project started in December 2014, using a formal consensus process as described by the French National Healthcare Institution (Haute Autorité de Santé HAS [12]). This process was described to be robust, clear and rigorous, as it is based on a repetitive evaluation by the following three groups of experts (Fig. 1).

The steering group

The steering group was composed by 15 meniscus treatment experts (13 orthopaedic surgeons, one physiotherapist and one epidemiologist) and was directed by two chairmen (PB and RB). The group had two missions: (1) Define a frame for the topic (2) Write down solid arguments based on a thorough literature review. Therefore, an extensive search of the literature was performed during January 2000–May 2015 in the following databases: PubMed, EMBASE and Medline, as well as the Cochrane Central Register of Controlled Trials (CENTRAL) (Wiley Online Library, May 2015). The searched combinations of terms included: "degenerative meniscus", "degenerative meniscal lesion", "degenerative meniscus surgery", "randomised control trial", "knee arthritis", "lavage", "debridement", "clinical trial", "meniscus imaging", "MRI", "horizontal cleavage", "intrameniscus signal", "unstable meniscus lesion", "unstable meniscus tear", "knee radiography", "mechanical symptom", "rehabilitation", "physiotherapy", "intra-articular injection", "sham", "placebo", "hyaluronic acid", "osteonecrosis", "meniscectomy", "partial meniscectomy", "complication", "extrusion". Language restriction was not set in this search, and all related references were also researched. Inclusion criteria were: (1) Level I and II studies, (2) human studies, (3) published between January 2000 and May 2015 and (4) more than four patients in the treatment group. All animal or cadaveric studies and studies about revision surgeries were excluded. For topic(s) without strong scientific evidence, we included Level III and IV studies. For quality assessment, all eligible studies were evaluated independently by two reviewers (MO and PB) according to the criteria of the Cochrane Handbook for Systematic Reviews [15]. A list of questions and their related answers (question–answer sets) were defined and assorted to the levels of recommendation proposed by Shekelle et al. [23] (grade A: high scientific level, grade B: scientific presumption, grade C: low scientific level, grade D: expert opinion). Both questions with limited «scientifically based answers» as well as questions with clear «scientific evidence answers» in the current literature were treated, provided that recommendations were just decreased to a lower grade.

The rating group

The rating group was composed of 23 experts from 16 European countries involved in meniscus surgery in their daily practice. The mission of this group was to select and evaluate the question–answer sets through a numerical grading system. Every expert was asked to evaluate each couple by using a 1–9 points grading scale. Their recommendation was supposed to be based on the scientific level of the available literature as well as their personal experience. A value of 1 meant that the rater considered the proposal totally inappropriate (or not indicated or unacceptable), whereas a value of 9 indicated that the rater considered the proposal totally appropriate (or indicated or acceptable). Values of 2–8 represented possible intermediate situations. A proposal was deemed appropriate when the value of the median was $\geq$7, and the scores of each rater were $\geq$5. According to the formal consensus rules, low scores were not taken into account when coming from only one single rater. The proposals on which members of the rating group agreed and those on which they differed or were undecided were identified by means of votes conducted in two rounds and an interim feedback steering group meeting.

The peer-review group

This third and last group was composed of 46 orthopaedic surgeons, who perform knee arthroscopies on a daily basis and can be considered as representatives of the European community of orthopaedic surgeons who take care of painful knees. They were asked to participate in the consensus initiative through the executive boards of the affiliated national subspecialty societies of ESSKA. The mission of this group was to evaluate the manuscript draft after the grading process of the rating group in order to determine the feasibility, accessibility and readability of the proposed recommendations.

The manuscript elaboration process

After revision by the rating group, the steering group produced a manuscript which was submitted to the peer-review group. The steering group organised a final plenary assembly of both the steering and rating groups to produce a final manuscript which was submitted to the peer-review group. Finally, the steering group designed complementary documents: summary, brochure, keynote for podium presentations and scientific papers. Altogether, the complete consensus initiative involved 84 clinicians from 22 European countries. Through this long and complex process, the authors aimed at reducing the risk of any single individual or country-specific bias in the orthopaedic community and at increasing the general acceptance of the initiative due to the involvement of a large number of participants.

Results

The question–answer sets

The question–answer sets were related to the four following subjects: the background of degenerative meniscus lesions (A), their imaging (B) and management (C), as well as a diagnostic and therapeutic algorithm (D). Background, imaging and management sections include questions, their respective answers and the proposed grade of the answers. To support each question and answer set, an extensive literature review was provided by the experts. For practical reasons, the extensive list of references (125 references) is not provided in this article. It can be downloaded from the ESSKA website (http://www.esska.org/education/projects).

Results of the grading process

After the second rating round, the median score for each question–answer set ranged between 7.5 and 8.9. All raters scored at least five or more for each proposed question–answer couple, except one rater who scored <5 for 12 out of 20 questions. According to the formal consensus rules, these isolated low scores were not taken into account. All the question–answer sets were thus considered as appropriate.

Background

What is a degenerative meniscus lesion?

A degenerative meniscus lesion is a slowly developing lesion, typically involving a horizontal cleavage of the meniscus in a middle-aged or older person. Such meniscus lesions are frequent in the general population and are often incidental findings on knee MRI (Fig. 2). The pathogenesis is not fully understood. There is often no clear history of an acute knee injury (Grade B).

Which MRI criteria characterise a degenerative meniscus lesion?

A degenerative meniscus lesion is usually characterised by linear intrameniscus MRI signal (including a component with horizontal pattern) often communicating with the inferior meniscus surface on at least two image slices. A more complex tear pattern in multiple configurations may also occur. The most common location of a degenerative meniscus lesion is the body and (or) posterior horn of the medial meniscus (Grade B).

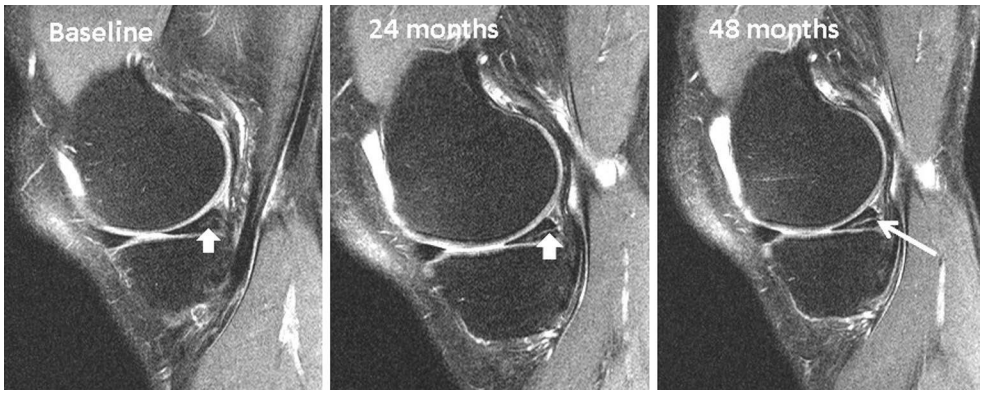

Fig. 2 Development of an intrameniscus signal into a horizontal cleavage lesion in the posterior horn of a medial meniscus over a period of four years captured on repeat 3-Tesla knee MRI (courtesy of M Englund)

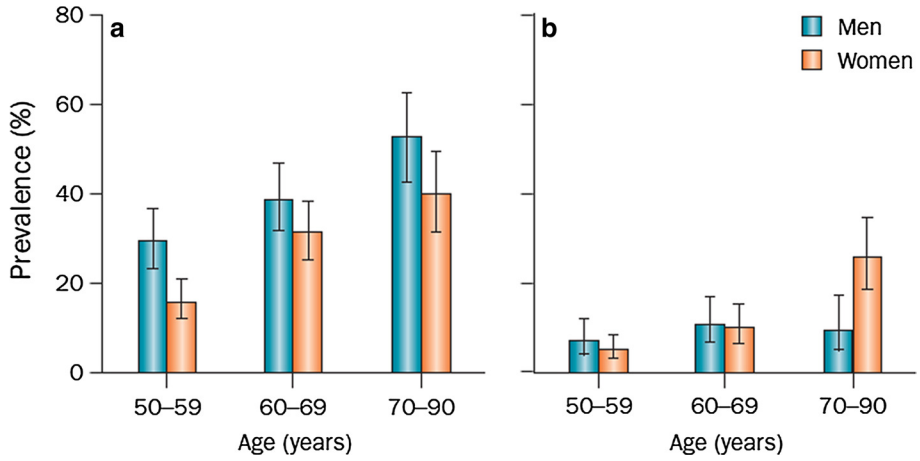

Fig. 3 Prevalence of meniscus lesions and destruction in a randomly recruited population-based sample. **a** Meniscus tear and **b** meniscus destruction (not classified as a tear) in the right knee of men ($n = 426$) and women ($n = 565$) aged 50–90 from Framingham, MA, USA. The diagnosis was based on MRI. Participants were not selected on the basis of knee or other joint problems. *Error bars* show the 95% CI (reprinted with permission from New Engl J Med)

What is the prevalence of degenerative meniscus lesions?

The prevalence of meniscus lesions (on the knee level) in the general population [intrameniscus signal extending to surface according to the two-slice touch rule (Fig. 3)] is:

1. Age 50–59 years ≈ 25%;
2. Age 60–69 years ≈ 35%;
3. Age 70–79 years ≈ 45%;
4. Patients with knee osteoarthritis ≈75–95%.

Please note that the estimates above do not include meniscus destruction/maceration, i.e. absence of normal meniscus tissue, which is also a frequent finding particularly in elderly women (Grade B).

Do degenerative meniscus lesions cause knee symptoms?

There is very limited evidence that pain in the degenerative knee is directly attributable to a degenerative meniscus lesion even if the lesion is considered to be unstable. Great caution must be taken before arriving at the conclusion that the degenerative meniscus lesion is the direct cause of the patients' knee symptoms (Grade B).

Does an unstable degenerative meniscus lesion cause knee symptoms?

While there is limited support in the literature that degenerative meniscus lesions considered to be unstable, e.g. flap tears, are truly causing knee symptoms, it is still plausible that, in some patients, torn meniscus parts from the degenerative lesion (by its displacement) may cause knee joint symptoms (Grade C).

What are the consequences of a degenerative meniscus lesion in the knee?

Loss of meniscus function may negatively affect the knee in the long term. Therefore, in many people, the degenerative meniscus lesion (which may impair the force transmission and load distribution capabilities of the meniscus) is a

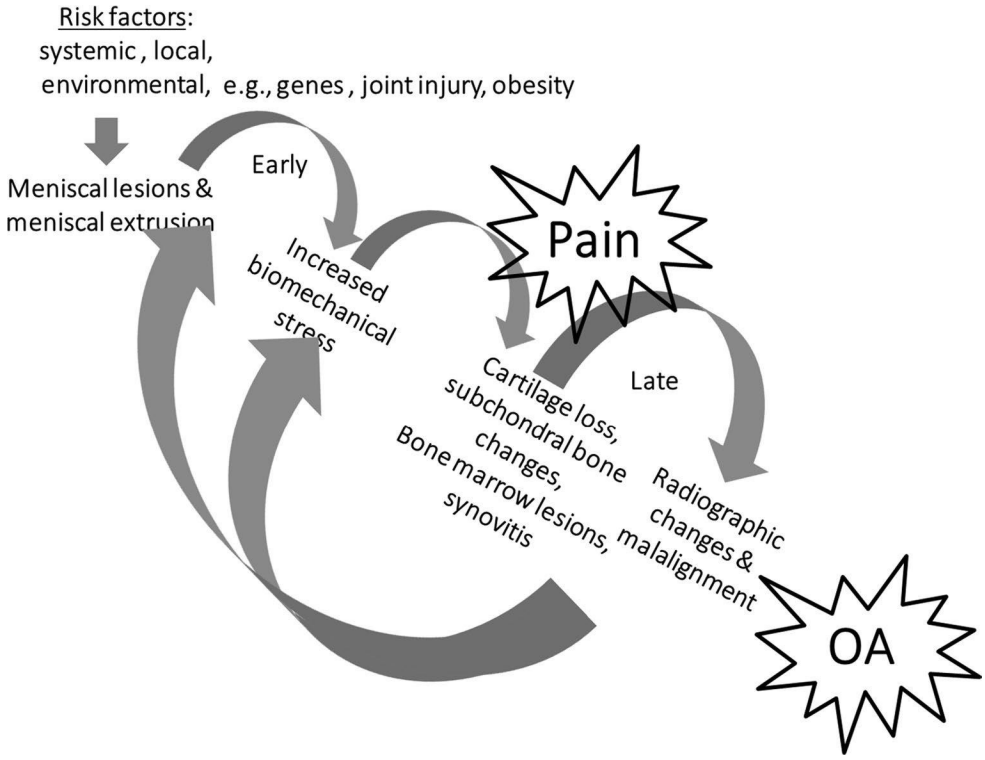

Fig. 4 Meniscus pathway to knee osteoarthritis

feature indicative of a knee joint with (or at increased risk of) developing osteoarthritis (Grade B).

Are degenerative meniscus lesions a cause or consequence of knee osteoarthritis?

The answer to this question is still unclear. However, one causal pathway does not necessarily exclude the other, i.e. one phenotype of knee osteoarthritis may start with meniscus degradation and degenerative lesion leading to loss of meniscus function and osteoarthritis development. In turn, osteoarthritis and its general degradation of the knee joint, involving multiple structures, may also cause degenerative meniscus lesions and extrusion that further accelerate structural progression of the disease (Fig. 4) (Grade B).

Imaging

What is the role of knee radiographs in the assessment of middle-aged or older patients with a painful knee?

Knee radiography should be used as a first-line imaging tool to support a diagnosis of osteoarthritis or to detect certain rarer pathologies of the knee. Therefore, at least a posterior-anterior weight-bearing semi-flexed knee radiograph and a lateral view should be included in the work-up of the middle-aged or older patient with knee pain (Grade B).

How should we make the diagnosis of knee osteoarthritis on a daily practical basis?

The clinical diagnosis of osteoarthritis can typically be made on the basis of the duration and character of the knee joint symptoms, patient history (including the presence of strong risk factors for osteoarthritis such as age, limb malalignment, obesity, heredity, prior knee injuries and surgeries) and findings from clinical examination. In the orthopaedic setting, weight-bearing semi-flexed knee radiographs (such as the Lyon Schuss or Rosenberg view) should be included in the work-up of the middle-aged or older patient with knee pain. A skyline patella view is also important for the detection of radiographic evidence of patella-femoral osteoarthritis. Please note that plain knee radiography does not necessarily capture early stages of symptomatic knee osteoarthritis (Grade B).

What is the role of knee MRI in the assessment of a middle-aged or older patient with a painful knee?

Knee MRI is typically not indicated in the first-line work-up of the middle-aged or older patients with knee joint symptoms. However, knee MRI may be indicated in selected patients with refractory symptoms or in the presence of "warning flags" or localised symptoms indicating a rarer disease that needs to be ruled out, e.g.

Table 1 Two RCT's specifically focused on OA knees [17, 19] and five on degenerative meniscus lesions without OA: similar results

References	Inclusion criteria (arthritis)	Conclusion
Moseley et al. [19]	KL ≤ 4	Debridement = Sham
Kirkley et al. [17]	KL 2–4	Debridement = PT
Herrlin et al. [13, 14]	Al ≤ 1	APM = PT
Katz et al. [16]	KL ≤ 1	APM = PT
Yim et al. [30]	KL ≤ 1	APM = PT
Sihvonen et al. [22]	KL ≤ 1	APM = Sham-
Gauffin et al. [11]	KL ≤ 2 + Mechanical symptoms	APM + PT > PT

APM arthroscopic partial meniscectomy, *PT* Physiotherapy, *KL* Kellgren–Lawrence classification

osteonecrosis. Hence, if a surgical indication is considered, based on history, symptoms, clinical exam and knee radiography, knee MRI may be useful to identify structural knee pathologies that may (or may not) be relevant for the symptoms (Grade B).

Management

Are functional outcomes of arthroscopic partial meniscectomy (APM) and non-operative treatment different, based on osteoarthritic (OA) status?

No study compared OA knees with non-OA knees regarding the treatment. Thus, data are lacking on the relationship between the duration of symptoms, stage and location of OA, etc., and the treatment outcomes (Grade D) (Table 1).

What is the patient population defined by the RCT studies?

Based on RCT inclusion criteria, the studies include patients with:

- Age ≥35 years (Grade A).
- Male or female (Grade A).
- Daily or almost daily knee pain >1 month (Grade A).
- Medial or lateral degenerative meniscus lesion (Grade A).
- With or without mechanical symptoms (Grade A).

What does non-operative treatment mean?

1. No evidence of which time/type of non-operative treatment should be proposed.
2. In the current literature, RCTs have proposed various rehabilitation protocols, however, non-operative treatment could also consist of NSAID (if no contraindications), intra-articular injection,[1], physiotherapy and/or home exercises for 3–6 months (Grade B).

It is important to note that no study has focused on functional outcomes of non-operative treatment vs placebo (or nothing).

What is the rate of conversion to surgery in those patients undergoing non-operative treatment?

Non-operative treatment is converted to surgery (cross-over) in 0–35% of the patients (Grade A).

This cross-over rate has to be compared to the rate of arthroscopic treatment failure.

Is the concept of an unstable meniscus useful for indicating meniscectomy (locking, clicking, MRI flap, etc.)?

There are controversies regarding the definition and role of mechanical symptoms as an indication for APM. The definition of "mechanical symptoms" remains unclear and further investigations are needed, as it may cover a wide range of symptoms with different severity and frequency. In the RCT by Gauffin et al. [11], patients' history of symptoms (i.e. mechanical symptoms or acute onset of symptoms) did not affect outcomes (but patients with a joint locking lasting longer than 2 s more than once a week were excluded). Pooled results of all RCTs reveal very limited added benefit of APM for degenerative meniscus regardless of pre-operative symptoms (fixed locking knee or knee with recurrent catching symptoms excluded) (Grade A).

Sihvonen et al. [25] did not find any benefits over sham APM to relieve knee catching or occasional locking. (Grade A).

Indication for early APM depends on the intensity and frequency of mechanical symptoms, as well as a thorough clinical examination (Fig. 5) (Grade D).

What outcomes can be expected after arthroscopic partial meniscectomy (APM)?

1. Improvement of functional outcomes can be expected after APM (Grade A).
2. Most of the RCTs found no difference in terms of clinical outcomes after surgery compared to non-operative treatment (Grade A).
3. When surgical treatment is proposed after a non-operative treatment failure, APM will result in similar but not superior results than successful non-operative treatment (Grade A).

[1] The benefit or risk of corticoid intra-articular injection has to be discussed regarding the risk of hidden osteonecrosis. Efficacy of hyaluronic acid injection is controversial.

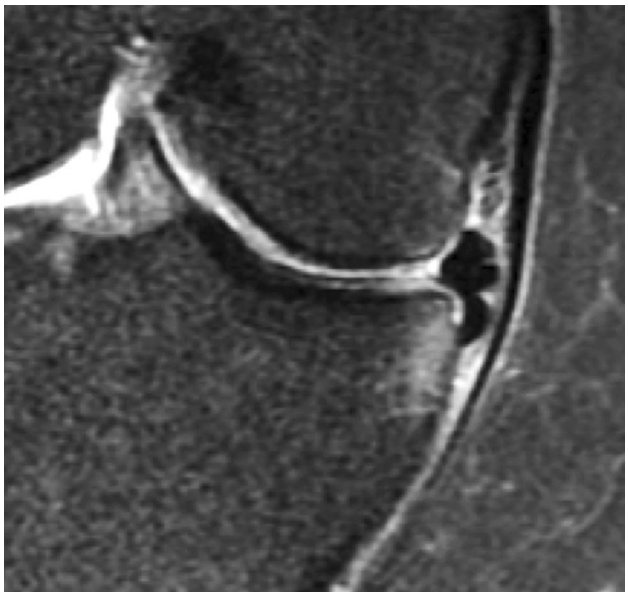

Fig. 5 Medial meniscus flap subluxated in the tibial gutter with bony impingement. This kind of specific degenerative meniscus lesion may be associated with significant mechanical symptoms and pain

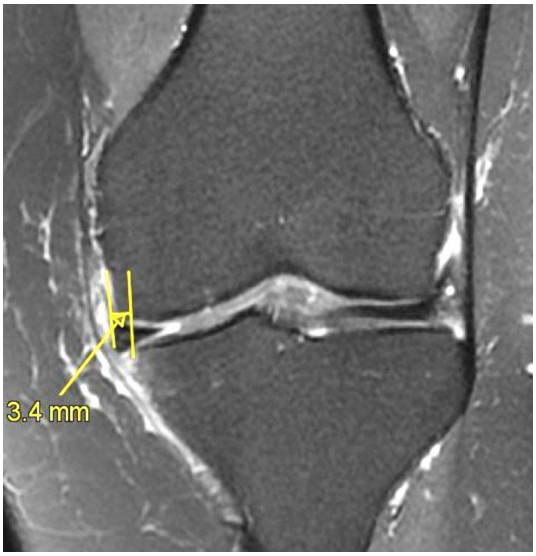

Fig. 6 Medial meniscus extrusion (>3 mm) demonstrating an early osteoarthritic stage (MRI: coronal view; T2 FS)

4. Three to six percent of patients will require another surgical procedure in the year following APM (Grade A).
5. Various predictive factors of poor results or treatment failures have been described in the current literature (increased BMI, lateral side, chondral damage, bone marrow oedema, meniscus extrusion (Fig. 6) and total or subtotal meniscectomy (Grade C).

The group wants to state that:

The previous consensus statements refer to RCTs with Per-Protocol analyses. While mid-term outcomes may be similar, short-term outcomes (<12 months) might be better with APM than with non-operative treatment. The indication for early APM may also depend on the intensity and frequency of mechanical symptoms, as well as physical evaluation (Grade D).

What is the rate of surgical complications after meniscus resection?

The rate of surgical complication is low (0.27–2.8%) (Grade A).

After APM, the rate of complications is dependent on laterality, i.e. a lateral meniscectomy is associated with a higher rate of complications than a medial one (Grade A).

What is the risk of osteoarthritis after meniscus resection?

1. Patients treated with APM for degenerative meniscus lesion present a higher risk for symptomatic knee osteoarthritis compared to patients with normal knee (healthy subjects). Risk of OA is higher on the lateral side (Grade C).
2. Patients with a total meniscectomy (removal of the peripheral rim) present a higher risk for symptomatic knee osteoarthritis compared to patients with partial meniscectomy (Grade C).
3. Cartilage damage or bone marrow lesions prior to APM are major factors of poor outcomes (Grade C).
4. Meniscus extrusion (Fig. 6) is associated with local osteonecrosis after APM (Grade C).

Is there a place for arthroscopic lavage (or lavage and debridement: arthroscopic procedure including degenerative (meniscus/chondral) and/or synovial tissue debridement?) for OA knees?

There is no place for arthroscopic lavage (or debridement) for painful knees with osteoarthritis (K/L $\geq$ 2). RCT's have shown that debridement/lavage has little, if any, effect on patients' short-terms reported outcomes, satisfaction or pain compared to non-operative treatment (Grade A).

Debridement might be indicated for young patients suffering from considerable mechanical symptoms (Grade D).

When should arthroscopic partial meniscectomy (APM) be proposed?

1. Surgery should not be proposed as a first line of treatment of DMLs (Grade A).

2. APM may be proposed after 3 months and persistent pain and/or mechanical symptoms related to a DML with normal X-rays but an abnormal MRI (Grade III meniscus lesion). The patient has to be informed about chances of successful outcomes and risks of either method (Grade B).
3. Surgery can be proposed earlier for patients presenting considerable mechanical symptoms. The patient has to be informed of chances and risks of either method (Grade D).

However, the steering group wants to state that mechanical symptoms cannot be clearly defined according to the current literature.

4. No arthroscopic surgery should be proposed for a DML with advanced OA on weight-bearing radiographs (Grade A).

An exception should be discussed for young patients with considerable symptoms.

Algorithm (Fig. 7)

Because of the absence of studies defining the optimal timing between the onset of symptoms, the beginning of non-operative treatment and the surgical decision following non-operative treatment failure, 3 months after the onset of the symptoms, should be considered as a reasonable delay before the decision to proceed with APM is made. This time corresponds to the mean period between non-operative treatment and conversion to APM in RCT(s) (Grade A). Three to six months should elapse after the onset of symptoms before any surgery is proposed to a patient suffering from non-locked, non-arthritic knee pain due to a DML (Grade A).

Indication for surgery may be considered earlier if the patient presents with considerable mechanical symptoms (such as lack of range of motion; daily joint catching; and joint locking for more than 2 s over at least 1 week) (Grade D).

Discussion

The main finding of the European consensus in the treatment of patients with a symptomatic knee and a DML was that APM should not be proposed as a first-line treatment. The main reason is that the patient's symptoms may not necessarily relate to the actual DML but to more unspecific joint or joint line pain related to early onset osteoarthritis. APM should only be proposed after a proper standardised clinical and radiological evaluation. When investigating knee joint symptoms for a middle-aged or older patient, MRI is typically not indicated in the first-line work-up due to its high cost and the inherent and high risk of findings which are not related to the clinical problem [10]. In the daily clinical orthopaedic setting, knee radiographs should be used as an imaging tool to support a diagnosis of osteoarthritis or to detect certain rarer pathologies such as tumours or fractures of the knee.

This consensus process bears some limitations. First, we based our rationale and answers on available scientific literature: RCTs—as good as they may be—have their own biases and weaknesses [7]. RCTs including sham procedures do have a very elegant design since they eliminate the potential placebo effect of the arthroscopic procedure, but they do not correspond to daily clinical practice. Second, some clinical situations or signs are difficult to define with precision, both in the literature and in the daily clinical practice. "Mechanical symptoms" have not been exactly defined so far. They may be considered a key factor in the surgical decision-making process potentially leading to controversial conclusions. Gauffin et al. [11] found better outcomes in the surgery group, independent of the presence of "mechanical symptoms" (catching, locking knee less than once a week). Sihvonen et al. [25] compared outcomes of APM and sham surgery, based on the presence or absence of pre-operative mechanical symptoms. Mechanical symptoms were defined by patients' self-report as a sensation of catching or locking: true locked knees or recently locked knees were excluded. Mechanical symptoms were reported in 49% of the entire cohort. In their post hoc analysis, arthroscopic partial meniscectomy had no benefit over sham APM to relieve knee catching or occasional locking. The facts that only one-fourth of the patients showed a positive McMurray test, and conversely 49% of the patients reported mechanical symptoms, suggest that there is a need for further definition of the mechanical symptoms and description of the size, type and location of the meniscus tear [29]. In the same way, the timing to consider arthroscopic surgery can be a source of controversy. Three months from the onset of symptoms was agreed on as a general rule as it is the time generally adopted in the RCTs.

Third, a consensus, as good as it may be, is not the only factor which will influence surgeons and patients treatment decisions. There are many "peripheral" practical constraints such as the myth "I always did so, I learned to do so" [2], the skill and simplicity of the procedure or the societal pressure (i.e. time to return to sports/work or medico-economic constraints that are highly variable between European countries and may orientate the decision in different ways). These "peripheral" constraints may limit the impact of a consensus but should not modify its main messages that non-surgical options should be the first-in-line treatment and that standardised clinical and imaging evaluation is needed before proposing an APM. Despite its inherent limitations, this work does not aim to provide a strict guideline. It should rather reflect a

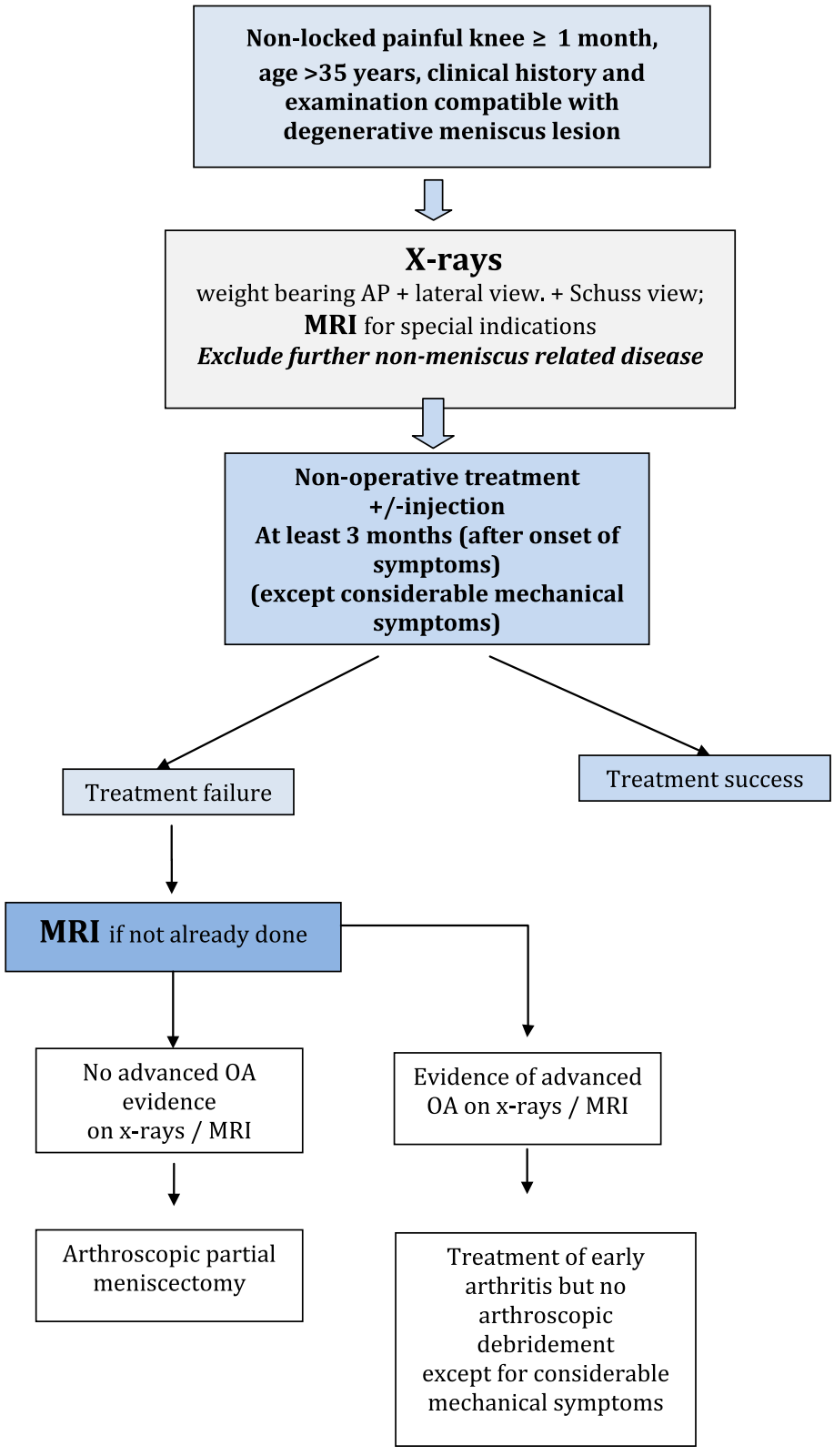

Fig. 7 Algorithm for the management of Degenerative Meniscus Lesions

clear framework in the management of a DML with well-balanced information, based on the currently available scientific evidence and the clinical expertise of 84 experienced European practitioners and scientists.

Finally, a consensus is not a final statement. It can be completed or modified with time according to the evolution of the specialty and as new evidence emerges [3, 22]. As such, the present work is neither a systematic literature

review, nor a formal meta-analysis, but the first European orthopaedic consensus initiative in the field of meniscus lesions. Medical professionals from a total of 22 European countries were involved in an independent and well-defined process, allowing control and feedback regarding 20 question–answer sets and an algorithm. Despite geographic and medico-economic differences among those physicians, all questions and answers eventually reached a high degree of consensus. The findings will hopefully assist every orthopaedic clinician in their decision-making when confronted with patients with a DML in a symptomatic knee.

Conclusion

The main finding of this first European consensus in the treatment of patients with a symptomatic knee and a degenerative meniscus lesion was that arthroscopic partial meniscectomy should not be proposed as a first-line treatment. The main reason is that the patient's symptoms are not necessarily related to the degenerative meniscus lesion, but to more unspecific pain related to early osteoarthritis. Arthroscopic partial meniscectomy should only be proposed after a standardised clinical and radiological evaluation.

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Compliance with ethical standard

Conflict of interest *P Beaufils* Occasional Education Consultant for Zimmer and Biomet, and Smith and Nephew. Chief Editor of Orthopaedics and Traumatology: Surgery and Research; *R. Becker* Deputy Editor-in-Chief of KSSTA, Education Consultant for Mathys, Wolf; *M. Ollivier* No conflict with the present manuscript. *S. Kopf* web-editor of KSSTA; *M. Englund* Board member of Osteoarthritis Research Society International and the Swedish Cruciate Ligament Register; *R. Seil* President of ESSKA.

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[Intervention Review]

Arthroscopic surgery for degenerative knee disease (osteoarthritis including degenerative meniscal tears)

Denise O'Connor[1], Renea V Johnston[1], Romina Brignardello-Petersen[2], Rudolf W Poolman[3], Sheila Cyril[1], Per O Vandvik[4], Rachelle Buchbinder[1]

[1]Department of Epidemiology and Preventive Medicine, School of Public Health and Preventive Medicine, Monash University; Monash-Cabrini Department of Musculoskeletal Health and Clinical Epidemiology, Cabrini Health, Melbourne, Australia. [2]Department of Health Research Methods, Evidence, and Impact, McMaster University, Hamilton, Canada. [3]Department of Orthopaedic Surgery, Onze Lieve Vrouwe Gasthuis, Amsterdam, Netherlands. [4]Department of Medicine, Lovisenberg Diaconal Hospital, Oslo, Norway

Contact: Rachelle Buchbinder, rachelle.buchbinder@monash.edu.

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ABSTRACT

Background

Arthroscopic knee surgery remains a common treatment for symptomatic knee osteoarthritis, including for degenerative meniscal tears, despite guidelines strongly recommending against its use. This Cochrane Review is an update of a non-Cochrane systematic review published in 2017.

Objectives

To assess the benefits and harms of arthroscopic surgery, including debridement, partial menisectomy or both, compared with placebo surgery or non-surgical treatment in people with degenerative knee disease (osteoarthritis, degenerative meniscal tears, or both).

Search methods

We searched the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, Embase, and two trials registers up to 16 April 2021, unrestricted by language.

Selection criteria

We included randomised controlled trials (RCTs), or trials using quasi-randomised methods of participant allocation, comparing arthroscopic surgery with placebo surgery or non-surgical interventions (e.g. exercise, injections, non-arthroscopic lavage/irrigation, drug therapy, and supplements and complementary therapies) in people with symptomatic degenerative knee disease (osteoarthritis or degenerative meniscal tears or both). Major outcomes were pain, function, participant-reported treatment success, knee-specific quality of life, serious adverse events, total adverse events and knee surgery (replacement or osteotomy).

Data collection and analysis

Two review authors independently selected studies for inclusion, extracted data, and assessed risk of bias and the certainty of evidence using GRADE. The primary comparison was arthroscopic surgery compared to placebo surgery for outcomes that measured benefits of surgery, but we combined data from all control groups to assess harms and knee surgery (replacement or osteotomy).

Main results

Sixteen trials (2105 participants) met our inclusion criteria. The average age of participants ranged from 46 to 65 years, and 56% of participants were women. Four trials (380 participants) compared arthroscopic surgery to placebo surgery. For the remaining trials, arthroscopic surgery was compared to exercise (eight trials, 1371 participants), a single intra-articular glucocorticoid injection (one trial, 120 participants), non-arthroscopic lavage (one trial, 34 participants), non-steroidal anti-inflammatory drugs (one trial, 80 participants) and weekly hyaluronic acid injections for five weeks (one trial, 120 participants). The majority of trials without a placebo control were susceptible to bias: in particular, selection (56%), performance (75%), detection (75%), attrition (44%) and selective reporting (75%) biases. The placebo-controlled trials were less susceptible to bias and none were at risk of performance or detection bias. Here we limit reporting to the main comparison, arthroscopic surgery versus placebo surgery.

High-certainty evidence indicates arthroscopic surgery leads to little or no difference in pain or function at three months after surgery, moderate-certainty evidence indicates there is probably little or no improvement in knee-specific quality of life three months after surgery, and low-certainty evidence indicates arthroscopic surgery may lead to little or no difference in participant-reported success at up to five years, compared with placebo surgery.

Mean post-operative pain in the placebo group was 40.1 points on a 0 to 100 scale (where lower score indicates less pain) compared to 35.5 points in the arthroscopic surgery group, a difference of 4.6 points better (95% confidence interval (CI) 0.02 better to 9 better; I^2 = 0%; 4 trials, 309 participants). Mean post-operative function in the placebo group was 75.9 points on a 0 to 100 rating scale (where higher score indicates better function) compared to 76 points in the arthroscopic surgery group, a difference of 0.1 points better (95% CI 3.2 worse to 3.4 better; I^2 = 0%; 3 trials, 302 participants).

Mean post-operative knee-specific health-related quality of life in the placebo group was 69.7 points on a 0 to 100 rating scale (where higher score indicates better quality of life) compared with 75.3 points in the arthroscopic surgery group, a difference of 5.6 points better (95% CI 0.36 better to 10.68 better; I^2 = 0%; 2 trials, 188 participants). We downgraded this evidence to moderate certainty as the 95% confidence interval does not rule in or rule out a clinically important change.

After surgery, 74 out of 100 people reported treatment success with placebo and 82 out of 100 people reported treatment success with arthroscopic surgery at up to five years (risk ratio (RR) 1.11, 95% CI 0.66 to 1.86; I^2 = 53%; 3 trials, 189 participants). We downgraded this evidence to low certainty due to serious indirectness (diversity in definition and timing of outcome measurement) and serious imprecision (small number of events).

We are less certain if the risk of serious or total adverse events increased with arthroscopic surgery compared to placebo or non-surgical interventions. Serious adverse events were reported in 6 out of 100 people in the control groups and 8 out of 100 people in the arthroscopy groups from eight trials (RR 1.35, 95% CI 0.64 to 2.83; I^2 = 47%; 8 trials, 1206 participants). Fifteen out of 100 people reported adverse events with control interventions, and 17 out of 100 people with surgery at up to five years (RR 1.15, 95% CI 0.78 to 1.70; I^2 = 48%; 9 trials, 1326 participants). The certainty of the evidence was low, downgraded twice due to serious imprecision (small number of events) and possible reporting bias (incomplete reporting of outcome across studies). Serious adverse events included death, pulmonary embolism, acute myocardial infarction, deep vein thrombosis and deep infection.

Subsequent knee surgery (replacement or high tibial osteotomy) was reported in 2 out of 100 people in the control groups and 4 out of 100 people in the arthroscopy surgery groups at up to five years in four trials (RR 2.63, 95% CI 0.94 to 7.34; I^2 = 11%; 4 trials, 864 participants). The certainty of the evidence was low, downgraded twice due to the small number of events.

Authors' conclusions

Arthroscopic surgery provides little or no clinically important benefit in pain or function, probably does not provide clinically important benefits in knee-specific quality of life, and may not improve treatment success compared with a placebo procedure. It may lead to little or no difference, or a slight increase, in serious and total adverse events compared to control, but the evidence is of low certainty. Whether or not arthroscopic surgery results in slightly more subsequent knee surgery (replacement or osteotomy) compared to control remains unresolved.

PLAIN LANGUAGE SUMMARY

Arthroscopic surgery for degenerative knee disease

Background

Degenerative knee disease (osteoarthritis in the knee which affects the joint lining and menisci) is the most common cause of knee pain, swelling and stiffness in the knee joint which leads to difficulty in walking. The cartilage in the knee joint is damaged, resulting in friction in the joint surfaces and formation of new bone in severe cases. Arthroscopic knee surgery removes damaged cartilage and loose tissue and smooths the knee joint surfaces.

Study characteristics

We included 16 randomised trials (2105 participants) published up to 16 April 2021. Trials were conducted in Canada, Denmark, Finland, Italy, Norway, Pakistan, South Korea, Spain, Sweden, Netherlands and USA.

Overall, 56% of participants were women. The average age of participants ranged from 46 to 65 years and the average duration of symptoms ranged from 1.6 months to 4.4 years. Of the nine trials reporting their funding source, none received funding from industry. The other seven trials did not report any funding source.

We limit reporting to the main comparison, arthroscopic surgery versus placebo (dummy or sham) surgery.

Key results

Compared with placebo surgery, arthroscopic surgery had little benefit:

Pain (lower scores mean less pain)

Improvement in pain was 4.6 points better (0.02 better to 9 better) on a 0 to 100 point scale with arthroscopic surgery than with placebo, 3 months after surgery.

• People who had arthroscopic surgery rated their post-operative pain as 35.5 points.

• People who had placebo surgery rated their post-operative pain as 40.1 points.

Knee function (higher scores mean better function)

Improvement in knee function was 0.1 points better (3.2 worse to 3.4 better) on a 0 to 100 point scale with arthroscopic surgery than with placebo, 3 months after surgery.

• People who had arthroscopic surgery rated their post-operative knee function as 76.0 points.

• People who had placebo surgery rated their post-operative knee function as 75.9 points.

Knee-specific quality of life (higher scores mean better quality of life)

Improvement in knee-specific quality of life was 5.6 points better (0.4 better to 10.7 better) on a 0 to 100 point scale with arthroscopic surgery than with placebo, 3 months after surgery.

• People who had arthroscopic surgery rated their post-operative quality of life as 75.3 points.

• People who had placebo surgery rated their post-operative quality of life as 69.7 points.

Treatment success (rated by participants)

8% more people rated their treatment a success (25% fewer to 63% more), or 8 more people out of 100, at up to 5 years after surgery.

• 82 out of 100 people reported treatment success with arthroscopic surgery.

• 74 out of 100 people reported treatment success with placebo surgery.

Serious adverse events

2% more people (2% fewer to 10% more) had serious adverse events, or 2 more people out of 100, at up to 5 years after surgery.

• 8 out of 100 people reported serious adverse events with arthroscopic surgery.

• 6 out of 100 people reported serious adverse events with placebo surgery.

Total adverse events

2% more people (3% fewer to 11% more), had adverse events, or 2 more people out of 100, at up to 5 years after surgery.

• 17 out of 100 people reported adverse events with arthroscopic surgery.

• 15 out of 100 people reported adverse events with placebo surgery.

Subsequent knee surgery

2% more people (0.1% fewer to 9% more), had subsequent knee surgery, or 2 more people out of 100, at up to 5 years.

• 4 out of 100 people had knee replacement or osteotomy (knee surgery that reshapes bone) with arthroscopic surgery.

• 2 out of 100 people had knee replacement or osteotomy with placebo surgery.

Certainty of the evidence

We are confident that knee arthroscopy does not provide any clinically important benefits in terms of pain and function. We are moderately confident that knee arthroscopy probably does not provide any clinically important benefits in knee-specific quality of life over a placebo procedure. Knee arthroscopy may not increase participant-reported success compared with placebo. We have little confidence in the evidence because of differences across trials in reporting success and the small number of events. We are less certain of the risk of serious and total adverse events in arthroscopy versus placebo surgery: the evidence was uncertain because of the small number of events and incomplete reporting of study information.

Adverse events associated with surgery include total knee replacement, osteotomy, repeat arthroscopy, arthroscopy in opposite knee, cutaneous nerve lesion (damage to nerves in the skin), deep or superficial infection, general knee pain, swelling, instability, stiffness or decreased range of motion in the affected or opposite knee, haemarthrosis (bleeding into the knee joint), death, acute myocardial infarction (heart attack), hypoxaemia (decreased oxygen in the blood), deep vein thrombosis (blood clot in the deep veins), tendonitis (inflammation of tendons), pain from fall or other trauma, rupture of a Baker's cyst (a fluid-filled sac behind the knee), and back or hip or foot pain.

Arthroscopic surgery may or may not lead to slightly more subsequent knee surgery (replacement or osteotomy) than the placebo procedure.

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Artroscopische chirurgie bij degeneratieve knieaandoeningen

Degeneratieve knieaandoeningen (knieartrose, degeneratieve meniscusscheuren of beide) zijn wereldwijd een belangrijke oorzaak van invaliditeit. De prevalentie stijgt bovendien door de groeiende wereldbevolking, vergrijzing en toename van zwaarlijvigheid. Artroscopische chirurgie blijft een frequent gebruikte behandeling, hoewel de meeste richtlijnen het gebruik ervan sterk afraden bij knieartrose.

In deze Cochrane review bekeken de auteurs de voor- en nadelen van artroscopische chirurgie bij knieartrose, degeneratieve meniscusscheuren of beide.

De review includeerde studies die artroscopische chirurgie (debridement, partiële menisectomie of beide) vergeleken met placebochirurgie of met niet-chirurgische interventies (o.a. oefentherapie, injecties, medicatie). De belangrijkste uitkomsten waren pijn, functie, knie-gerelateerde levenskwaliteit, patiënt-gerapporteerd behandelingssucces, (ernstige) nevenwerkingen en kniechirurgie (vervanging of osteotomie). De review includeerde alle studies tot april 2021.

Geen effect op pijn en functie

Men identificeerde 16 studies met in totaal 2.105 deelnemers. De gemiddelde leeftijd varieerde van 46 tot 65 jaar en 56% waren vrouwen. Artroscopie werd vooral vergeleken met placebochirurgie (4 studies) en beweging (8 studies). De studies met placebochirurgie als controlebehandeling bleken minder gevoelig voor bias dan de andere studies. Placebochirurgie bestaat uit een oppervlakkige insnede in de knie en gefakede arthroscopische behandeling.

Artroscopische chirurgie leidt tot weinig of geen verschil in pijn of functie drie maanden na operatie vergeleken met placebochirurgie

Artroscopische chirurgie leidt tot weinig of geen verschil in pijn of functie drie maanden na operatie vergeleken met placebochirurgie (40.1 versus 44.7 punten op een 0 tot 100 schaal, waarbij een lagere score overeenkomt met minder pijn). De gemiddelde verbetering van 4.6 punten (95% BI*: 0.02 beter tot 9 beter; 4 studies, 309 deelnemers, hoge zekerheid) is klinisch niet belangrijk. De gemiddelde postoperatieve functie in de placebogroep bedroeg 75.9 punten op een schaal van 0 tot 100 waarbij een hogere score overeenstemt met betere functie. In de artroscopie was de gemiddelde score 76 punten. Ook deze gemiddelde verbetering van 0.1 punt (95% BI: 3.2 slechter tot 3.4 beter; 3 studies, 302 deelnemers, hoge zekerheid) is klinisch niet belangrijk. Ook op de lange termijn (tot 5 jaar na operatie) heeft artroscopie weinig of geen effect op pijn en functie vergeleken met placebo chirurgie.

Artroscopie levert bovendien waarschijnlijk weinig of geen klinisch belangrijke verbetering op in knie-gerelateerde levenskwaliteit (matige zekerheid) en patiënt-gerapporteerd behandelingssucces (lage zekerheid).

Artroscopie levert bovendien waarschijnlijk weinig of geen klinisch belangrijke verbetering op in knie-gerelateerde levenskwaliteit en patiënt-gerapporteerd behandelingssucces.

Meer bijwerkingen?

Het bewijs voor risico's op ernstige of alle bijwerkingen is minder zeker. Hier werd artroscopie vergeleken met alle controlebehandelingen samen (placebochirurgie en niet-chirurgische actieve behandelingen). Ernstige bijwerkingen traden in de artroscopiegroep op bij 8% (95% BI: 4% tot 16%; 8 studies, 1.206 deelnemers). Bij de controlegroep was dat 6%. Dit verschil heeft een lage zekerheid. 'Ernstige bijwerkingen' waren onder andere heroperatie, longembolie, diepveneuze trombose, hartaanval, postoperatieve infectie. 'Alle bijwerkingen' omvat zowel ernstige bijwerkingen als minder ernstige zoals voorbijgaande pijn in rug, heup of voet, peesontsteking, pijn en zwelling in de geopereerde knie, oppervlakkige ontsteking, misselijkheid. Alle bijwerkingen zag men in de artroscopiegroep bij 17% (95% BI: 12% tot 26%; 9 studies, 1326 deelnemers,) tegen 15% in de placebogroep. Het verschil heeft een lage zekerheid. Artroscopie verhoogt mogelijk de patiënt-gerapporteerde progressie van knieartrose (lage zekerheid). Verdere kniechirurgie (vervanging of osteotomie) werd in de artroscopiegroep gerapporteerd bij 5% (95% BI: 1.4-10.8%, 4 studies, 864 deelnemers) tegen 1,5% in de controlegroep; lage zekerheid.

Mogelijk spontane verbetering

Artroscopische chirurgie heeft weinig of geen klinisch belangrijk effect op pijn of functie, heeft waarschijnlijk weinig of geen klinisch belangrijk effect op knie-specifieke gezondheidsgerelateerde levenskwaliteit en heeft mogelijk weinig of geen effect op het aantal mensen dat de behandeling succesvol vindt vergeleken met placebochirurgie. Verder is er mogelijk een lichte stijging, in het aantal ernstige bijwerkingen, het totaal aantal bijwerkingen en het aantal patiënten die verdere kniechirurgie ondergaat. Deze resultaten zijn van toepassing op mensen met knieartrose met of zonder meniscusscheuren, evenals mensen met enkel degeneratieve meniscusscheuren.

Deze resultaten zijn direct relevant voor patiënten bij wie een artroscopie wordt overwogen omdat dit niet direct voordelen geeft maar mogelijk wel het risico op bijwerkingen op zowel de korte alsook op de lange termijn vergroot. Uit andere literatuur blijkt dat symptomen allicht met de tijd zullen verbeteren ongeacht de behandeling.

Anne-Catherine Vanhove, Trudy Bekkering, Patrik Vankrunkelsven
Centrum voor Evidence-Based Medicine (Cebam)

BI*: betrouwbaarheidsinterval

>>O'Connor D, Johnston RV, Brignardello-Petersen R, Poolman RW, Cyril S, Vandvik PO, Buchbinder R.

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BIJLAGE 9: VERGELIJKING MET ANDERE LANDEN

Op 1 januari 2019 telde België 11.431.406 inwoners. Bron: Statbel (Algemene Directie Statistiek - Statistics Belgium), geraadpleegd op 07.10.2022 via https://statbel.fgov.be/nl/themas/bevolking/structuur-van-de-bevolking#panel-13.

- 32.254 meniscectomieën in 2019
  → dit komt overeen met **28,22** meniscectomieën/10.000 inwoners in België
  (= (32.254 / 11.431.406) * 10.000)
- indien indicator 45 % (voorstel indicator DGEC - KCE - CEBAM), dan waren er 24.161 meniscectomieën
  → dit komt overeen met **21,14** meniscectomieën/10.000 inwoners in België
  (= (24.162 / 11.431.406) * 10.000)
- indien indicator 50 % (voorkeur BVOT - BKS), dan waren er 26.578 meniscectomieën
  → dit komt overeen met **23,25** meniscectomieën/10.000 inwoners in België
  (= (26.578 / 11.431.406) * 10.000)

Andere landen

1. Jacquet, C., Pujol, N., Pauly, V., Beaufils, P., Ollivier, M. (2019). Analysis of the trends in arthroscopic meniscectomy and meniscus repair procedures in France from 2005 to 2017. *Orthop Traumatol Surg Res*, *105*(4), 677-682. doi: 10.1016/j.otsr.2019.01.024

	Jaar	Aantal per 10.000	
France	2005	19,80/10.000 inhabitants	meniscectomy
	2017	**15,77**/10.000 inhabitants	meniscectomy
	2005 – 2017	**20,05**/10.000 inhabitants on average per year	meniscectomy
United Kingdom	1998	5,1/10.000 inhabitants	meniscectomy
	2013	14,9/10.000 inhabitants	meniscectomy
	2017	**12**/10.000 inhabitants	meniscectomy
Denmark	2000	16,1/10.000 inhabitants	meniscus procedures
	2011	**31,2**/10.000 inhabitants	meniscus procedures

2. Holtedahl, R., Brox, J.I., Aune, A.K., Nguyen, D., Risberg, M. A. & Tjomsland, O. (2018). Changes in the rate of publicly financed knee arthroscopies: an analysis of data from the Norwegian patient registry from 2012 to 2016. *BMJ Open*, *8*(6), e021199. doi: 10.1136/bmjopen-2017-021199

	Jaar	Aantal per 100.000	
Norway	2012	310 per 100 000	knee arthroscopies*
	2016	**207** per 100.000	knee arthroscopies*
Swiss study of patients aged >40 years	2012	388 per 100.000	knee arthroscopy
	2015	**352** per 100.000	knee arthroscopy
Sweden	2012	206 per 100.000	arthroscopy
	2016	**157** per 100.000	arthroscopy
Denmark	2012	290 per 100.000	arthroscopy
	2016	**183** per 100.000	arthroscopy
Finland	2012	339 per 100.000	arthroscopy
	2016	**187** per 100.000	arthroscopy

* Meniscal procedures comprised about 85% of all knee arthroscopies throughout the study period. The overall rate of meniscal resections fell from 256 to 156 per 100 000

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Original article

Analysis of the trends in arthroscopic meniscectomy and meniscus repair procedures in France from 2005 to 2017

Christophe Jacquet[a,b], Nicolas Pujol[c], Vanessa Pauly[b], Philippe Beaufils[c], Matthieu Ollivier[a,b,*]

[a] Department of Orthopaedic Surgery, Sainte-Marguerite Hospital, AP–HM, institut du mouvement et de l'appareil locomoteur, 13009 Marseille, France
[b] CNRS, IMS UMR 7287, Aix-Marseille University, 13009 Marseille, France
[c] Département de chirurgie orthopédique de l'hôpital Mignot, 177, rue de Versailles, 78150 Le Chesnay, France

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ABSTRACT

Introduction: In 2008, the French National Authority for Health (HAS) recommended that "conservative" treatments be adopted for meniscal lesions. This recommendation and the lack of superiority of meniscectomy over non-operative treatment for meniscus degeneration have modified the treatment pathway. However, the impact of these findings on French clinical practice is not known. The objective of this study was to evaluate the change over time in the number of alternative surgical procedures (meniscectomy and meniscus repair) and regional variation in France using data from the French agency for information on hospital care (ATIH).
Hypothesis: We hypothesized that the number of meniscectomy procedures will decrease, and the number of repair procedures will increase over time at various healthcare facilities.
Patients and methods: Between 2005 and 2017, the number of hospitalizations in the Medicine-Surgery-Obstetrics wards for meniscectomy (NFFC003 and NFCC004) or meniscus repair (NFEC001 and NFEC002) was evaluated overall and then based on whether the stay occurred in public or private sector hospitals in France. Data were extracted from the ATIH database and the findings were (1) related to French demographics during the period in question; (2) separated into public or private sector hospitals; (3) distributed into various regions in France and; (4) stratified by patient age.
Results: Between 2005 and 2017, 1,564,461 meniscectomy and 63,142 meniscus repair procedures were done in France. Over this period in the entire country, the meniscectomy rate gradually decreased from 19.80/10,000 inhabitants in 2005 to 15.77/10,000 inhabitants in 2017 (21.4% reduction) ($p < 0.0001$) while the meniscus repair rate increased from 0.42/10,000 inhabitants in 2005 to 1.36/10,000 inhabitants in 2017 (320% increase) ($p < 0.0001$). The largest meniscectomy reduction effort occurred in private sector hospitals, going from 15.79 to 12.01/10,000 inhabitants in 12 years; the decrease was smaller in public hospitals (going from 4.01 to 3.77/10,000 inhabitants) ($p < 0.0001$ in both cases). The change in the procedure ratio between private and public hospitals was asymmetric, with the meniscus repair/meniscectomy ratio clearly increasing more in public hospitals (4% to 12.6%) between 2005 and 2017 than in private hospitals (1.6% to 6.6%) ($p < 0.0001$). We found large regional differences: regions in Eastern France had higher meniscectomy rates, while regions in Western France had higher meniscus repair rates. When the analysis of procedures between 2008 and 2017 was stratified by age, a similar increase in repair procedures was found in all age brackets. Conversely, the reduction in meniscectomy was most apparent before 40 years of age, and the number of meniscectomy procedures was stable after 60 years of age.
Conclusion: These findings suggest there has been a significant shift in the surgical management of meniscal injuries towards more conservative treatments. But the large variations between regions in France is evidence of a continued disparity in clinical practices.
Level of evidence: IV, retrospective study without control group.

* Corresponding author at: Department of Orthopedics and Traumatology, St. Marguerite Hospital, 270, boulevard Sainte-Marguerite, BP 29, 13274 Marseille, France.
E-mail address: ollivier.matthieu@yahoo.fr (M. Ollivier).

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1. Introduction

The meniscus plays a fundamental role in knee kinematics by intervening in load transmission, shock absorption and knee stability [1–3]. Meniscal lesions can have a congenital, traumatic or degenerative origin. For many years, arthroscopic surgical treatment of these lesions solely consisted of partial or total meniscectomy, before the first conservative meniscus repair techniques were introduced in the 1980s [4,5]. The deleterious effects of meniscectomy on clinical function and the development of osteoarthritis in the medium and long term are now well known [6–9]. Better understanding of the role of the meniscus, pathogenesis and meniscectomy outcomes led to the development of the "meniscus preservation" concept. This concept now rests on three approaches: meniscectomy as partial as possible—always arthroscopic—surgery avoidance (non-surgical treatment) and meniscus repair. Meniscus repair aims to trigger healing of damaged tissues. It assumes that a biological healing process is possible due to its peripheral vascularization network [10].

Recommendations of the French National Authority for Health (HAS) in June 2008 confirm the need to spare or preserve the meniscus tissue. In traumatic lesions, a meniscectomy that is as sparing as possible is reserved for non-repairable lesions [11]. For degenerative lesions, recent recommendations based on scientific proof of the lack of superiority of arthroscopic meniscectomy relative to non-surgical treatment have resulted in meniscectomy being indicated only following failure of non-surgical treatment or in rare instances with obvious mechanical signs [12]. However, the impact of these recommendations on clinical practice in France is unknown. This led us to conduct a systematic analysis of French data available on the website of the Agency for Information on Hospital Care (ATIH) to evaluate (1) the change over time in the number of procedures, and (2) regional variations in the surgical treatment options (meniscectomy vs meniscus repair). We hypothesized that the number of meniscectomy procedures would decrease while the number of repair procedures would increase over time in the various hospital settings.

2. Material and methods

2.1. Data extraction

In the period between 1st January 2005 to 31st December 2017, all hospitalizations in the medicine-surgery-obstetrics wards each year for meniscectomy procedures (NFFC003: lateral or medial meniscectomy of the knee, by arthroscopy and NFCC004: lateral and medial meniscectomies of the knee, by arthroscopy) or meniscus repair procedures (NFEC001: reattachment or repair of two menisci in the knee, by arthroscopy and NFEC002: reattachment or repair of one meniscus in the knee, by arthroscopy) were scanned and separated based on whether they were performed in a private sector or public sector hospital as defined in the quantified national target in France.

After collecting the raw data, the overall numbers were filtered to remove inconsistencies between procedures performed and the associated procedure codes (exclusion when a procedure code associated with that of meniscus surgery was atypical and did not apply to knee arthroscopy). We chose not to include meniscectomy and repair procedures performed by arthrotomy, as these are less common and may induce additional bias. It is important to specify that meniscus procedures combined with procedures on the knee joint (especially anterior cruciate ligament (ACL) reconstruction) were not captured by our analysis given it is theoretically impossible to associate these procedures during coding in ATIH database. Thus, our study pertains to meniscus procedures without associated ligament procedures, whether on a stable knee or lax knee that was or was not reconstructed beforehand. Extraction of anonymous data was done using the open-access ATIH web platform.

2.2. Data evaluation

The resulting data were:

- related to French demographics in the period of interest calculated by the French National Institute of Statistics and Economic Studies (INSEE) and expressed as the number of procedures per 10,000 inhabitants;
- separated into public sector or private sector hospitals;
- separated by regions in France (as defined by the Regional Health Agency in the French regional distribution in 2016);
- broken down by patient age into brackets of < 20 years/20–29 years/30–39 years/40–49 years/50–59 years/60+ years. Within this breakdown, a subgroup analysis was done using patients < 40 years of age and those > 50 years of age. The aim of the latter was to provide a less biased estimate due to the lack of diagnostic coding (separating degenerative and traumatic lesion), since patients < 40 years of age are more likely to suffer traumatic lesions and those > 50 years of age are more likely to suffer degenerative lesions. Patients 40 to 50 years of age were removed from this analysis to simplify this split.

2.3. Statistical analysis

This epidemiology study using the extensive data in the French medicalized information system program (PMSI) did not seek to compare data using mathematical inference methods (analysis of a sample to extrapolate the findings to the broader population). The numerical data are an exhaustive collection (but potentially biased due to the acquisition method) of our daily practice and as such, do not require a statistical model to assess their relevance. Nevertheless, informative calculations with the large-sample Chi-square test were done to provide comparisons of percentages and ratios that are backed up by figures.

3. Results

3.1. Meniscectomy versus meniscus repair

From January 2005 to December 2017, 1,564,461 meniscectomy procedures (20.05/10,000 inhabitants on average per year) and 63,142 meniscus repair procedures (0.81/10,000 inhabitants on average per year) without associated ligament procedures were carried out, all types of hospitals pooled together.

Throughout France, a gradual reduction of the meniscectomy rate was found, going from 19.80/10,000 inhabitants in 2005 to 15.77/10,000 inhabitants in 2017 (21.4% decrease) ($p < 0.0001$). In this same period, the meniscus repair rate went from 0.42/10,000 inhabitants in 2005 to 1.36/10,000 inhabitants in 2017 (320% increase) ($p < 0.0001$) (Table 1).

The repair/meniscectomy ratio (R/M) for all hospitals pooled together increased from 2.1 in 2005 to 8.6 in 2017 ($p < 0.0001$).

3.2. Trends by hospital type

The reduction in the meniscectomy rate was greater in private sector hospitals, going from 15.79/10,000 to 12.01/10,000 inhabitants in 12 years ($p < 0.0001$), than in public hospitals (going from 4.01/10,000 to 3.77/10,000) ($p = 0.3$).

Between 2005 and 2017, the meniscus repair rate went from 0.6/10,000 inhabitants to 0.79/10,000 inhabitants for private sector

Table 1
Number of surgical procedures per 10,000 inhabitants for each year with absolute value in parentheses.

Year	Meniscectomy private hospital	Meniscectomy public hospital	Meniscus repair private hospital	Meniscus repair public hospital
2005	15.79 (99071)	4.01 (25149)	0.26 (1607)	0.16 (1033)
2006	16.00 (101108)	4.30 (27151)	0.26 (1656)	0.14 (857)
2007	15.87 (100918)	4.33 (27526)	0.26 (1629)	0.15 (951)
2008	15.43 (98729)	4.36 (27901)	0.29 (1829)	0.16 (1004)
2009	15.08 (96972)	4.51 (29005)	0.33 (2147)	0.19 (1245)
2010	14.60 (94346)	4.47 (28895)	0.39 (2525)	0.20 (1315)
2011	14.38 (93390)	4.45 (28862)	0.42 (2723)	0.22 (1454)
2012	14.31 (93344)	4.47 (29173)	0.48 (3133)	0.27 (1765)
2013	13.47 (88308)	4.29 (28133)	0.55 (3637)	0.33 (2172)
2014	13.40 (88618)	4.28 (28317)	0.59 (3872)	0.35 (2317)
2015	12.93 (85942)	4.21 (27958)	0.67 (4423)	0.40 (2685)
2016	12.53 (83569)	3.97 (26457)	0.72 (4470)	0.50 (3315)
2017	12.00 (80382)	3.77 (25237)	0.79 (5282)	0.57 (3796)

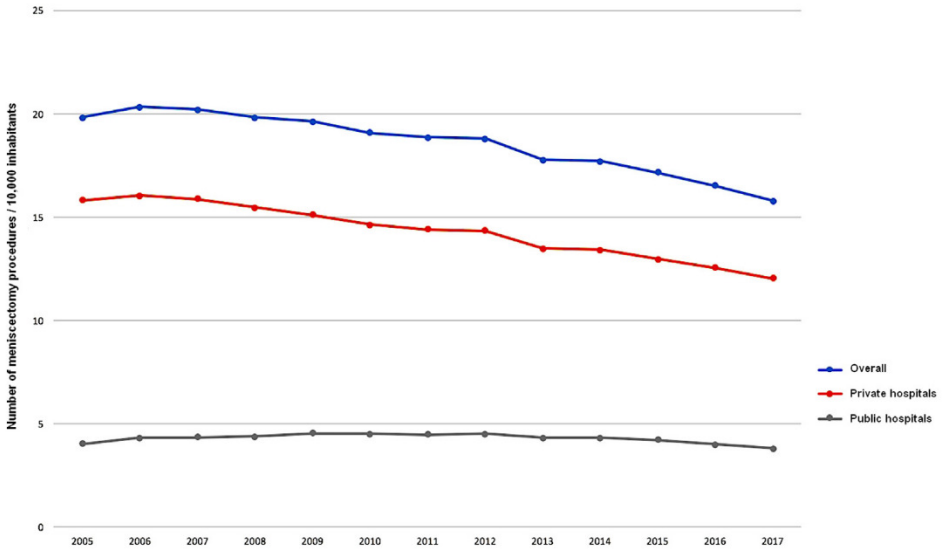

Fig. 1. Trends in meniscectomy procedures in public and private hospitals and overall. The number of procedures is reported per 10,000 inhabitants.

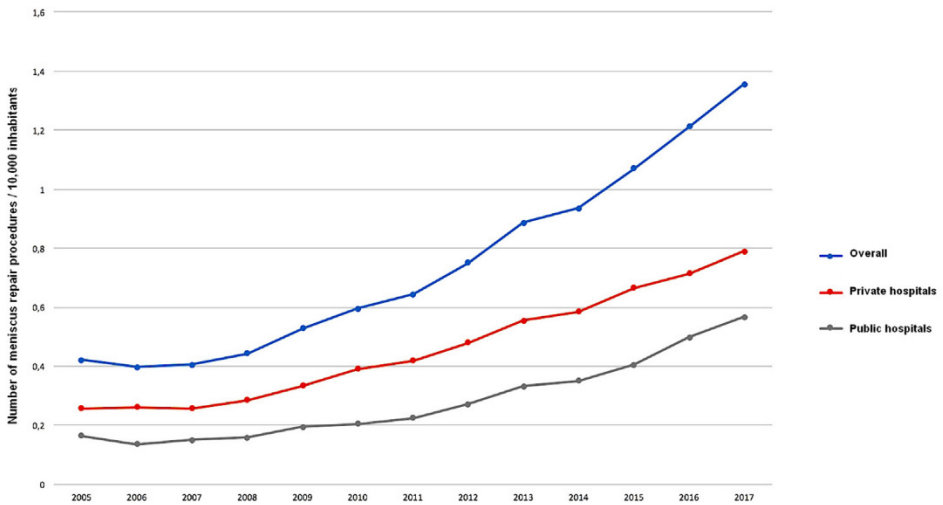

Fig. 2. Trends in meniscus repair procedures in public and private hospitals and overall. The number of procedures is reported per 10,000 inhabitants.

hospitals and from 0.16/10,000 inhabitants to 0.57/10,000 inhabitants for public hospitals ($p < 0.0001$) (Figs. 1 and 2).

The R/M ratio went from 1.64 to 6.6 for private hospitals ($p < 0.0001$) and 4.0 to 12.6 for public hospitals ($p < 0.0001$). The change was unequal between public and private hospitals with the ratio clearly increasing faster in public hospitals ($p < 0.0001$). In 2017, 41.8% of meniscus repair and 23.9% of meniscectomy procedures carried out that year were done at public hospitals.

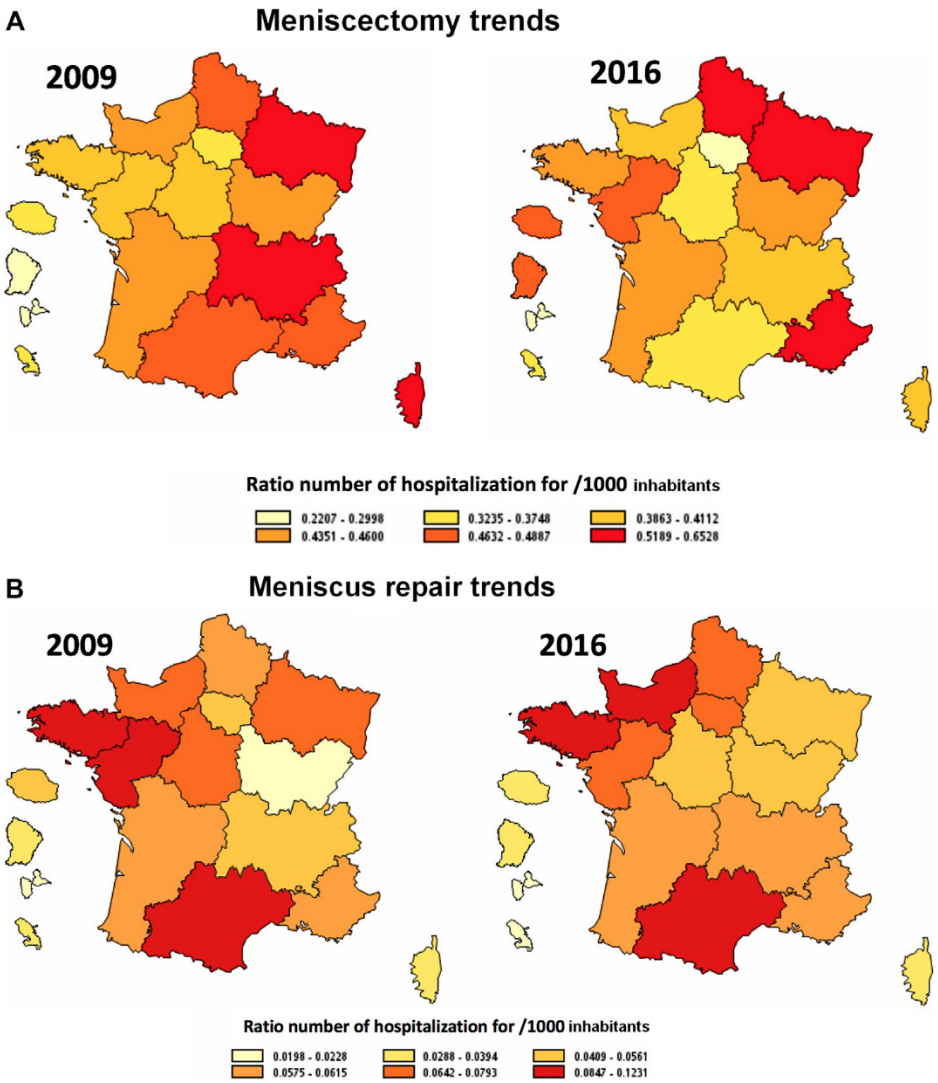

Fig. 3. Map of France showing how the meniscectomy and meniscus repair rates vary by region. The number of procedures is reported per 1000 inhabitants. A. Meniscectomy trends. B. Meniscus repair trends.

3.3. Regional trends

A regional difference was observed. For example, in 2012, there was a split between the Eastern regions where the meniscectomy rate was higher than in the remainder of France (Fig. 3A,B). The highest rates of meniscus repair were found in regions in the Northwest of France and around the Mediterranean.

3.4. Age breakdown

Between 2008 and 2017, there was an even increase in the number of meniscus repair procedures in all age brackets. There was an obvious reduction in the meniscectomy rate for the < 40 years segment, while this rate was relatively stable for the 50–59 years bracket and especially the 60+ years bracket (from 14.24/10,000 inhabitants in 2008 to 12.87/10,000 inhabitants in 2017 for 60+ years) (Figs. 4A,B).

In our analysis of the < 40 and > 50 segments, the reduction in the meniscectomy rate was confirmed in younger patients with a decrease from 55.9/10,000 inhabitants in 2008 to 38.1 in 2017 ($p < 0.0001$). This reduction was less pronounced in patients > 50 years of age with a change from 94.5/10,000 inhabitants in 2008 to 83.7 in 2017 ($p < 0.0001$).

4. Discussion

This study's main finding was the 21.4% reduction in the number of meniscectomy procedures performed between 2005 and 2017 in France and the 320% increase in the number of meniscus repair procedures performed, confirming our hypothesis. However, this change in clinical practices was not homogeneous and depended on the type of hospital (public or private), region in France and patient age. In fact, in private sector hospitals, a greater decrease in the meniscectomy rate was found (20% versus 6% for public hospital over 12 years), with no parallel increase in the number of meniscus repair procedures. In fact, 41.8% of all meniscus repair procedures and 23.9% of all meniscectomy procedures done in 2017 were performed at public hospitals. From a purely mathematical point of view, comparing percentages between different facilities and locations is affected by the mean regression phenomenon: the large difference in the volume of procedures between public and private hospitals "favors" public hospitals in our analysis, for which the changes are more "visible" and "marked" than at the private hospitals, where the modifications are more "compressed" and less obvious.

This difference in how practices have changed can also be seen in the regional distribution of the two procedures. In fact, the regional analysis found a split between Western France where

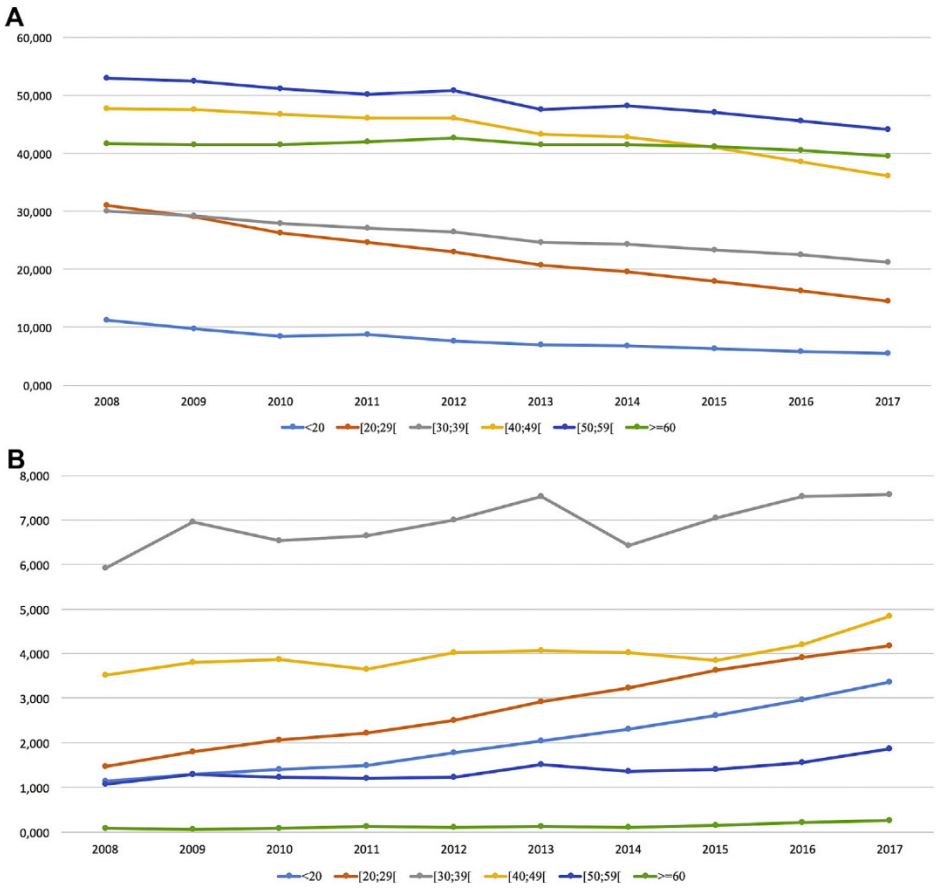

Fig. 4. Curves showing the trend in meniscectomy and meniscus repair rates by patient age. The number of procedures is reported by age bracket. A. Meniscectomy trends. B. Meniscus repair trends.

meniscal repair is performed more often and Eastern France where the meniscectomy rate is higher.

Few studies have looked into the surgical practice used to treated meniscal lesions. In the United States, Abrams et al. [13] reported that an increasing number of isolated meniscal repair procedures were done between 2005 and 2011 (11.4% increase in the total number of repairs in this period), without a concurrent increase in the number of meniscectomy procedures in the same period in patients less than 65 years of age. In the United Kingdom, the meniscectomy rate increased considerably from 1998 to 2013 (going from 5.1/10,000 inhabitants to 14.9) and then decreased slightly up to 2017 (to 12/10,000 inhabitants) [14]; however, this study provided no information on the change in the meniscal repair rate. In Denmark, Thorlund et al. [15] showed the number of meniscus procedures had doubled between 2000 and 2011 (16.1 to 31.2/10,000 inhabitants), with the largest increase seen in patients > 35 and > 55 years old. These findings suggest this increase in procedures mainly impacts patients with degenerative lesions. In another Danish study, Hare et al. [16] reported an increase in the rate of arthroscopic meniscus surgery (repair and meniscectomy) in public and private hospitals between 2000 and 2011. The increase was especially noticeable in the private sector, where the proportion of arthroscopic meniscus surgery went from 1% to 32% during this period. Analyzing data from other countries helps to confirm the recent international trend of less reliance on radial meniscectomy treatment and greater use of conservative meniscus repair, especially in younger patients.

Conversely, it also reveals a delay in diffusion, acceptance and implementation of research findings supporting no surgical treatment for degenerative meniscal lesions [11,12,17]. However, the results of studies from other countries were generated from a different type of database than the PMSI, thus unrelated to surgical procedure coding by the practitioner (Danish Register for Thorlund et al. [15] and Hare et al. [16], Pearl Driver for Abrams et al. [13] and Hospital Episode Statistics for Abram et al. [14]).

These studies are the only information available in the literature to compare our data. Thus, it is difficult to provide a definite explanation for the heterogeneity of the observed results, given the limited data in the ATIH database. Nevertheless, certain hypotheses can be made. The differences between private and public hospitals could be explained by the demographics of the patients treated, age, medical or surgical specialty and continuing medical education of the practitioners involved, combined with a coding and implant reimbursement system used that does not favor repair procedures. The regional differences could be attributed to heterogeneous surgical practices within France or to populations with demographics that differ between regions. As for the relative consistency of the meniscectomy rate in patients above 60 years of age in France, Denmark and the United Kingdom, we believe there is a delay in the consideration of scientific data when managing degenerative lesions, and also aging of the population, which theoretically increase the number of potential patients.

It is important to note that this analysis has significant limitations related to an obvious selection bias in the medical coding system:

- no coding during associated ACL reconstruction procedures, where meniscus repair would logically be more common than in cases of isolated meniscal lesions. In fact, it has been shown that systematic repair of meniscal lesions during ACL reconstruction surgery has a long-term benefit in that it prevents new lesions from developing [18]. No solution was available to identify this

case definition. The decision to not code the meniscus procedure during ACL reconstruction, which was desired by the law to lessen the emphasis on meniscus procedures, negatively affected our ability to analyze surgical practices. To place this in context, during 2017, about 46,000 ACL reconstruction procedures were done (data from the ATIH). While the percentage of associated meniscus procedures is impossible to determine, this figure lets us presume there is a large number of missing data on the number of meniscectomy or repair procedures done in combination with this reconstruction;

- differentiation between degenerative lesions (where meniscectomy largely prevails over meniscus repair) and traumatic lesions (where repairs should be more common), although the age breakdown of the data suggests that the shift from meniscectomy to meniscus repair is especially valid in patients under 40 years of age suffering from more traumatic lesions [12]. Thus, in patients more than 50 years of age for which the meniscal lesions are predominantly degenerative, the number of meniscectomy procedures done in France remained stable;
- data available on the ATIH internet portal did not allow us to quantify the amount of meniscal tissue removed. Hence, while meniscal repair is always preferable, meniscectomy that is as minimal as possible still has indications when repair is not technically feasible. It would have been interesting to determine whether the meniscectomy procedures were become increasingly sparing over the years by determining the percentage of tissue removed;
- we did not have access to the age breakdown within the various regions of France. Thus, it is impossible at this stage to claim the populations within these regions are comparable;
- lastly, since the medical treatment associated with surgical abstention (non-surgical treatment) has taken an important role in treating degenerative meniscal lesions [19], we could not follow how it changed given that this study focused on surgical procedures. A prospective multicenter study would not get around these limitations as it would induce a major selection bias and would not be representative of the general population. Also, it would be difficult to perform this study over a long period of time. Improving the coding system to promote meniscal repair procedures appears to be the only solution to make the PMSI information more exhaustive.

5. Conclusion

While the changes in practice vary based on patient age, between public and private hospitals, and between regions of France, we found a positive trend in surgical management of meniscal lesions in accordance with 2008 HAS and 2016 ESSKA recommendations, evidence of a generalized awareness of the concept of meniscus preservation. Changes to the rules for providing information about meniscus-related surgery are vital to refine this study by capturing every meniscus procedure, including those performed in combination with ACL reconstruction. Thus, awareness campaigns aimed at surgeons treating these lesions could be improved by taking into account evidence-based data on one hand and clinical practices data on the other.

Disclosure of interest

P.B.: occasional educational consultant for Zimmer/Biomet, Smith & Nephew, Editor-in-chief OTSR-RCOT. M.O.: occasional educational consultant for Stryker, Arthrex, Newclip Technics. N.P.: occasional educational consultant for Zimmer/Biomet and Smith & Nephew.

The other authors declare that they have no competing interest.

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Author contributions

P.B., N.P.: helped to design the study; critical review of the manuscript; C.J.: writing and correction of manuscript; M.O.: writing and correction of manuscript; V.P.: exploitation of the database.

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BMJ Open

Changes in the rate of publicly financed knee arthroscopies: an analysis of data from the Norwegian patient registry from 2012 to 2016

Robin Holtedahl,[1] Jens Ivar Brox,[2,3] Arne Kristian Aune,[4] Daniel Nguyen,[5] May Arna Risberg,[6] Ole Tjomsland[5]

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[1]Department of Habilitation and Rehabilitation, Innlandet Hospital Trust-Division Ottestad, Ottestad, Norway
[2]Department of Physical Medicine and Rehabilitation, Oslo University Hospital, Oslo, Norway
[3]Medical Faculty, University of Oslo, Oslo, Norway
[4]Orthopaedic Department, Aleris Hospital, Drammen, Norway
[5]South-Eastern Norway Regional Health Authority, Hamar, Norway
[6]Department of Sports Medicine, Norwegian School of Sport Sciences, Oslo, Norway

Correspondence to
Dr. Robin Holtedahl;
robi-hol@online.no

ABSTRACT

Objective To examine rates of publicly financed knee arthroscopic surgery in Norway between 2012 and 2016.

Design Analysis of anonymised data from the National Patient Registry.

Interventions Beginning in 2012, South-Eastern Norway Regional Health Authority implemented administrative measures to bring down rates of knee arthroscopy. Similar measures were not introduced in the other three Regional Health Authorities.

Main outcome measures We analysed annual national rates of publicly financed knee arthroscopies in 2012 and 2016. We compared the rates in South-Eastern Norway Regional Health Authority with corresponding rates in the rest of the country. Variations by county, public hospital versus publicly reimbursed private hospital, gender and age were also assessed.

Results The overall annual rate of arthroscopic procedures declined by 33% from 2012 to 2016, from 310 to 207 per 100 000 inhabitants, respectively. Hospitals in South-Eastern Norway Regional Health Authority reported a 48% reduction, compared with mean 13% in the other three Regional Health Authorities. In public hospitals, rates decreased nationally by 42%, while rates in publicly reimbursed private hospitals increased by 12%. Rates in publicly reimbursed private hospitals decreased by 30% in South-Eastern Norway Regional Health Authority but increased by 63% in the other Regional Health Authorities. The proportion of patients ≥50 years (excluding meniscal repairs) in Norway was 54% in 2012 and fell to 46% in 2016. Average rates per county varied by a factor of 3:1.

Conclusion We report a marked overall reduction of knee arthroscopic procedures from 2012 to 2016 in publicly funded hospitals. The largest decrease was reported in South-Eastern Norway Regional Health Authority, and this coincides in time with implemented administrative measures. The results suggest that the trend of increasing rates of knee arthroscopies can be reversed through purposeful professional and administrative interventions.

Strengths and limitations of this study

- We consider the data reliable because reporting to the National Patient Registry is a requirement for public reimbursement.
- Diagnoses were not registered, and the study period was limited to 5 years.
- Rates of knee arthroscopy in private hospitals without reimbursement by public healthcare are not available.

INTRODUCTION

Therapeutic knee arthroscopy has become the most commonly performed outpatient orthopaedic procedure in most countries with available data, including Norway. Joint debridement and lavage for osteoarthritis and meniscal resection or repair for meniscal lesions are the most commonly performed procedures. The increasing rates have been especially pronounced in middle-aged and elderly patients.[1] However, evidence of radiologically verified degenerative changes, including meniscal tears, are common in this age group, even in those without knee pain or history of knee injury.[2 3] Large regional variations of knee arthroscopy have also been described.[4] Several randomised controlled trials published during the last decades have been unable to demonstrate superiority of arthroscopic procedures over a sham procedure[5] or supervised physiotherapy.[6–11] These results have led to a critical reappraisal of these procedures, including recent systematic reviews and guidelines advising against arthroscopy as a first line of treatment for degenerative knee disorders.[12–14]

Of the four Regional Health Authorities in Norway, South-Eastern Norway Regional Health Authority is the largest, and responsible for secondary health services for more than half the Norwegian population. In 2012, South-Eastern Norway Regional Health Authority initiated a process aiming to reduce the volume of publicly financed arthroscopic procedures and unwarranted

regional variations. In joint meetings with the chief medical officers in the region and the Division of Orthopaedic Surgery, Oslo University Hospital, results of recent studies of arthroscopic procedures for degenerative meniscal tears and osteoarthritis were discussed, and also distributed to the chief medical officers at private hospitals with reimbursement contracts in the region. In 2015, South-Eastern Norway Regional Health Authority adjusted the terms for the contracts with the public and private providers, requiring that the proportion of treated patients above the age of 50 years did not exceed 20%, and that physical therapy should be tried for at least 3 months prior to surgery. Similar measures were not introduced in the other Regional Health Authorities.

The aims of this study are to estimate overall time trends in knee arthroscopy rates in Norway from 2012 to 2016, and to elucidate possible associations between observed changes and administrative or professional incentives.

METHODS

Subjects and procedures

We extracted anonymised data from Norwegian Patient Registry on arthroscopic knee procedures in public hospitals and private hospitals with reimbursement contracts between 2012 and 2016. Private hospitals operating on contract with the regional trust are hereafter denoted 'private hospitals'. Procedures not reimbursed by the public health system were not included. The procedures were debridement for osteoarthritis (code NGF31), meniscal repair (NGD21) and meniscal resection (NGD11) as defined by Nomesco Classification of Surgical Procedures. Only the primary procedure was registered. The rates of knee arthroscopies were based on the number of individual procedures, not patients. We did not obtain diagnoses of the patients, and the proportion of traumatic versus atraumatic cases is not known. Patients younger than 10 years were excluded. We analysed age-adjusted rates per county based on population statistics from Statistics Norway (https://www.ssb.no/en/), the number of procedures done in public hospitals versus private hospitals, time trends in total rates, regional variations and rates per age group and sex. Correlations between arthroscopy rates in public and private hospitals per county were analysed.

Ethics and statistics

This study included only anonymous data extracted from the Norwegian Patient Registry. Approval of access to the registry was obtained from the National Data Inspectorate. Differences in arthroscopy rates across gender and hospital provider type were analysed using χ^2 test. D'Agostino-Pearson test was used to test for normal distribution. Unpaired non-parametric data were analysed using the Mann-Whitney U test. Associations between rates in public versus private hospitals per county were assessed using Pearson correlation coefficient. Analyses were performed using Medcalc V.17.9.7 (www.medcalc.org).

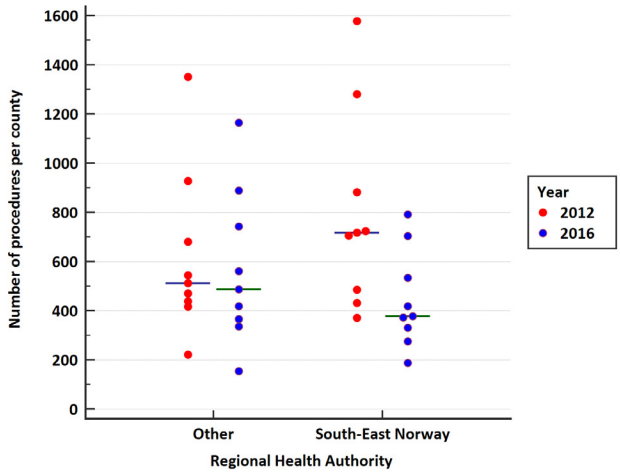

Figure 1 Number of knee arthroscopies per county in South-Eastern Norway Regional Health Authority in 2012 and 2016 versus other Regional Health Authorities. Each dot represents a county. Horizontal bars represent medians.

Patient and public involvement

Patients or public were not involved in this study.

RESULTS

From 2012 to 2016, 66 901 arthroscopic procedures were performed in public and private hospitals for meniscal lesions and osteoarthritis. A total of 13 652 procedures were performed in 2012, increasing to 16 157 in 2013 and decreasing to 9 543 in 2016. The rate of procedures per 100 000 was 310 in 2012 and 207 in 2016, a reduction of 33%. In the 10 counties in South-Eastern Norway Regional Health Authority, the overall rate in this period decreased from 325 to 171 per 100 000 (48%). In the remaining nine counties, the overall rate decreased from 290 to 253 per 100 000 (13%). The corresponding median rate reductions per county were 46% (CI from 41.2% to 49.6%) and 5% (CI −20.6% to 30.4%), respectively. Figure 1 shows the number of procedures per county in South-Eastern Norway Regional Health Authority compared with the other Regional Health Authorities in 2012 and 2016. Online supplementary figure 1 shows the number of procedures per Regional Health Authority in 2012 and 2016.

22 664 (34%) of all knee arthroscopies in the study period were performed in private hospitals, in which there nationally were 2943 procedures in 2012 and 3293 in 2016, an increase of 12%. In public hospitals, the corresponding numbers were 10 709 and 6250, a 42% reduction ($p<0.0001$ for difference public vs private hospitals). In private hospitals in South-Eastern Norway Regional Health Authority, there was a 30% reduction in mean rate per 100 000 in the study period, from 62 to 43, while there was an increase of 63% in private hospitals in the remaining Regional Health Authorities, from 67 to 109 ($p=0.0008$ for difference between the Regional Health Authorities). In public hospitals in South-Eastern

Table 1 Number, rate and rate change of all knee arthroscopies in 2012 and 2016 per Regional Health Authority (RHA), public and private hospitals

	Number of procedures		Rate per 100 000		Rate change
	2012	2016	2012	2016	2012–2016 (%)
All regions/hospitals	13 652	9543	310	207	–33
South-East RHA	8024	4421	326	171	–48
Other RHAs*	5628	5122	290	253	–13
All public hospitals	10 709	6250	243	136	–42
All private hospitals	2943	3293	67	71	12
Public hospitals South-East RHA	6430	3306	248	128	–49
Public hospitals other RHAs	4279	2944	212	146	–31
Private hospitals South-East RHA	1594	1115	62	43	–30
Private hospitals other RHAs	1349	2178	67	109	63

*West, Mid-Norway and North Regional Health Authorities.

Norway Regional Health Authority, there was a decrease of 49%, from mean rate 248 to 128 per 100 000, while there was a decrease of 31% in the remaining Regional Health Authorities, from 212 to 146 (p=0.07 for difference) (table 1).

Meniscal procedures comprised about 85% of all knee arthroscopies throughout the study period. The overall rate of meniscal resections fell from 256 to 156 per 100 000, a 36% reduction. In public hospitals, there was a 48% reduction, whereas there was a 7% increase in private hospitals (p<0.0001 for difference public vs private). The overall rate of meniscal repairs increased from 11 to 23 per 100 000, 87% of which were performed in public hospitals. Cartilage debridement rates decreased overall from 44 to 29 per 100 000, with a 45% reduction in public hospitals but a 16% increase in private hospitals (p<0.0001 for difference) (table 2).

The proportion of patients 50 years or older having meniscal resection and debridement in the study period fell from 54% to 44% in public hospitals in South-Eastern Norway Regional Health Authority, from 53% to 48% in public hospitals in the other Regional Health Authorities and from 58% to 48% in private hospitals in all regions (p=0.9 for differences) (figure 2, table 2). For meniscal repairs, the proportion of patients 40 years or older increased nationally from 13% to 19% in the study period (table 2). Rates of meniscal resections nationally were reduced by 24% in patients younger than 50 years and by 46% in patients 50 years or older in the study period (p<0.0001 for difference between age groups) (figure 3). The corresponding reductions for debridement were 26% and 36% (p=0.04) (table 2).

The percentage of males having knee arthroscopy in the study period was on average 60%. The male preponderance was more pronounced in the younger age groups (65% males <50 years vs 54% males ≥50 years). For males, arthroscopy rates decreased by 44% and for females by 39% in the study period (p=0.0009 for sex difference). In 2016, males comprised 62% of meniscal resections and repairs whereas debridements were performed at approximately similar rates for males and females (table 2).

The age-adjusted average rates of arthroscopies per county of residence in 2016 ranged from 119 to 391 per 100 000. There were also large variations in the contribution of private hospitals to overall arthroscopic rates per county, ranging from 7% to 69% (figure 4). There was a moderate positive correlation (r=0.47) between the rate of arthroscopies performed in public and private hospitals per county.

DISCUSSION

Using data from the Norwegian National Registry, this study found that knee arthroscopy rates nationally decreased by 33% from 2012 to 2016. The reductions varied by region, with hospitals in South-Eastern Norway Regional Health Authority reporting a 48% reduction compared with 13% in the other regions. Public hospitals reported a 42% reduction from 2012 to 2016, whereas private hospitals reported a 12% increase.

Reporting of data to the Norwegian Patient Registry is a precondition for reimbursement, and the figures presented are likely to represent a reliable estimate of the actual number of arthroscopic procedures in this 5-year period. Coding practices may vary between hospitals, and we cannot exclude recording errors. We did not differentiate between traumatic and non-traumatic disorders, and we have no information about clinical diagnosis or concomitant procedures (for instance if debridement was performed in conjunction with meniscal resection). Due to restrictions from the National Data Inspectorate, we were not able to obtain data prior to 2012, which precludes the possibility of viewing the rates in a longer time perspective.

Another limitation is the lack of publicly available information about the volume of knee arthroscopies performed by surgical units without public reimbursement contracts, even though compulsory reporting from these clinics to

Table 2 Number and proportion of meniscal resections, meniscal repairs and debridement by sex, age group, Regional Health Authority (RHA), public and private hospitals in 2012 and 2016

	Meniscal resection		Meniscal repair		Debridement	
	2012	2016	2012	2016	2012	2016
Sex, number (%)*						
Males	7181 (60)	4482 (62)	358 (66)	648 (62)	1950 (54)	677 (51)
Females	4859 (40)	2691 (38)	184 (34)	401 (38)	1633 (46)	652 (49)
Age group, number (%)						
10–19	301 (3)	343 (5)	155 (32)	289 (28)	70 (4)	71 (5)
20–29	722 (6)	719 (10)	180 (37)	334 (32)	156 (8)	134 (10)
30–39	1286 (11)	939 (13)	86 (18)	224 (21)	261 (14)	164 (12)
40–49	2734 (24)	1842 (26)	47 (10)	149 (14)	451 (23)	326 (25)
50–59	3117 (28)	1849 (26)	12 (2)	45 (4)	530 (28)	342 (26)
60–69	2313 (21)	1072 (15)	4 (1)	6 (1)	350 (18)	210 (16)
70–79	674 (6)	372 (5)	–	–	96 (5)	78 (6)
80+	106 (1)	37 (1)	–	–	13 (1)	4 (0.3)
Patients ≥ 50 by hospital type and region (%)						
Public, South-East RHA	59	46	–	4	52	56
Public, other RHAs	54	46	4	6	53	34
Private (all RHAs)	54	48	4	3	50	47
Hospital type and region, number (%)						
Public, South-East RHA	5531 (50)	2426 (34)	281 (58)	615 (59)	653 (23)	298 (39)
Public, other RHAs	3157 (28)	2114 (29)	205 (42)	295 (28)	822 (34)	508 (23)
Private, South-East RHA	1515 (13)	978 (14)	–	76 (7)	79 (4)	60 (4)
Private, other RHAs	976 (9)	1653 (23)	–	63 (6)	373 (19)	463 (34)
Sum annual procedures	11 253 (100)	7173 (100)	486 (100)	1049 (100)	1927 (100)	1329 (100)

*Values for '2012' refer to 2013.

the Norwegian Patient Registry has recently been called for. Voluntary health insurance has played an increasing role in Norwegian healthcare, with approximately a 12-fold increase in the number of insured persons during the last decade. By 2015, almost 500 000 persons (1/10 of the population) were covered, with 95% of the expenses carried by employer. In addition, some procedures are financed through out-of-pocket payments. The Regional Health Authorities have no financial or administrative role in privately financed surgical services.

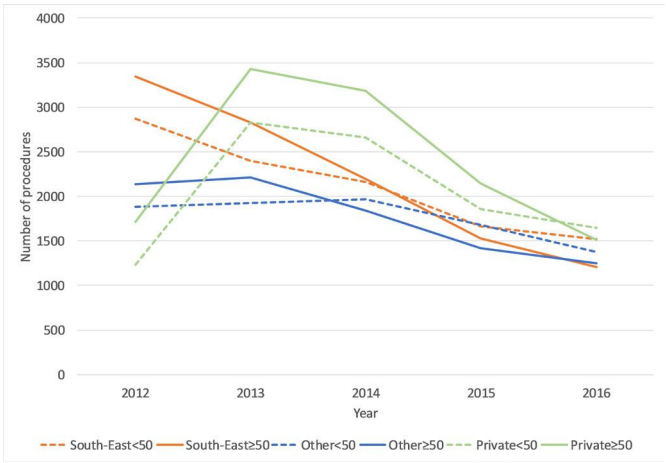

Figure 2 Number of meniscal resections and debridement for ages <50 and ≥50 in public hospitals in South-Eastern Norway Regional Health Authority, public hospitals in other Regional Health Authorities and all private hospitals with reimbursement contracts.

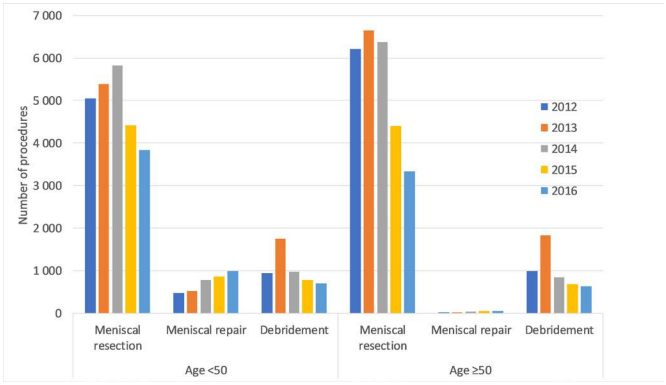

Figure 3 Number of meniscal resections, meniscal repairs and debridement per year for ages <50 and ≥50. All Regional Health Authorities, public and private hospitals.

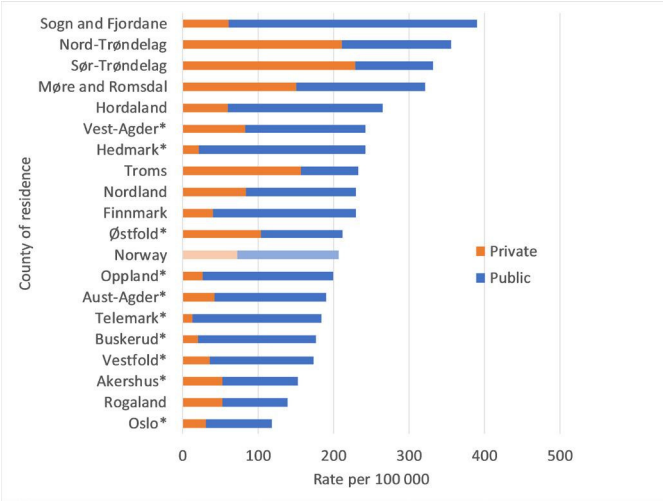

Figure 4 Age-adjusted annual rates of knee arthroscopy per 100 000 in 2016 per county of residence, public and private hospitals. *Counties in South-Eastern Norway Regional Health Authority.

Other authors have reported increases in knee arthroscopy rates, especially meniscal resections, since the 1990s[1 15–17] though this is not invariably the case.[16 18 19] There is limited evidence of more recent trends. Comparisons between studies are challenging due to varying coding procedure practices and differences in health insurance. A Swiss study of patients aged >40 years reported a 9% reduction in knee arthroscopy rates, from 388 to 352 per 100 000 between 2012 and 2015, with no described administrative or political regulations.[20] Finland, Denmark and Sweden have publicly accessible databases which all use the Nomesco classification and include privately financed procedures (sampo.thl.fi, sundhedsstyrelsen.dk and socialstyrelsen.se, respectively). From 2012 to 2016, arthroscopy rates per 100 000 in Sweden decreased from 206 to 157 (24%), in Denmark from 290 to 183 (37%) and in Finland from 339 to 187 (52%). These reductions have reportedly taken place without any administrative regulations. From 2017, arthroscopic procedures for degenerative knee conditions are no longer included in publicly funded healthcare services in Finland.

In spite of the decreases in arthroscopy rates in Norway since 2013, rates in 2016 were still higher than in Denmark, Sweden and Finland. One noteworthy finding in the present study is the divergence of rates in South-Eastern Regional Health Authority versus rates in other regions, as well as in public versus private hospitals nationally. It is tempting to attribute the described reductions in both public and private hospitals in South-Eastern Norway Regional Health Authority to the recommendations and more restrictive contract terms in the period 2012–2015, though it is prudent to emphasise that secular associations do not equate with causality.

Despite the described overall reductions, knee arthroscopies are still performed more often than justified based on recent high-quality research and evidence-based clinical practice guidelines.[14] This is especially relevant for the middle-aged and older age groups, where degeneration plays a major role. The requirement in the most recent bids from South-Eastern Norway Regional Health Authority is that at most 20% of operated patients should be >50 years. This is based on evidence showing that practically all patients in this age group have complaints that are not expected to benefit from arthroscopic procedures.[12 13] The proportion of older to younger patients was only reduced by seven percentage points in the same period which supports the need for stronger regulation of reimbursement. If the 80/20 rule had been implemented as required, about 2300 fewer arthroscopies would have been performed in 2016 (excluding meniscal sutures).

The large differences in arthroscopy rates per county are unlikely to be explained by medical factors. Factors at the administrative level (ie, differing influences and involvement by the Regional Health Authorities), varying attitudes and traditions among the referring general practitioners and orthopaedic surgeons and different access to evidence-based conservative management may play a role.[21] The positive per-county correlation between rates in public and private hospitals suggests that the private sector contributes to the variability of rates across counties. A supply-sensitive model may be more appropriate to explain this than a demand-sensitive model.[21] Instead of compensating for deficiencies in the public sector, the private hospitals seem to drive up overall rates even in counties with adequate capacities in public hospitals. Increasing arthroscopy rates in private hospitals have also been reported from Denmark and Australia.[4 22] Financial incentives are likely to influence surgical rates, especially in the private sector.[20 23]

The approach to the treatment of degenerative knee disorders could be described as preference sensitive, in that there has not traditionally been a clear consensus on how this group should be managed. Beliefs about the need for surgery in order to recover from a meniscal 'injury' as well as overoptimistic expectations of postoperative function and recovery have most likely contributed to the popularity of knee arthroscopy during the last two decades.[24] Improving patients' and healthcare providers' knowledge about evidence-based medicine is likely to reduce demand for knee surgery.[25] Inspired by recent randomised trials showing that arthroscopic procedures are not more effective than supervised physiotherapy in alleviating pain and improving function in patients with degenerative meniscal disorders, national models for implementation of evidence-based guidelines for treatment of degenerative meniscus tears, early and moderate knee and hip osteoarthritis were established in Denmark (GLAD: www.glaid.dk) and Sweden (BOA: https://boa.registercentrum.se).[26] Similar national models were established in Norway in 2015 through a treatment programme named AktivA (www.aktivmedartrose.no).

CONCLUSIONS

Rates of publicly funded arthroscopic knee procedures in Norway decreased overall by 33% from 2012 to 2016. Only public hospitals reported reductions, while rates in publicly reimbursed private hospitals increased by 12% in the same period. Compared with the other Regional Health Authorities, the reduction of procedures was larger in hospitals in the South-Eastern Norway Regional Health Authority. This coincides in time with strong recommendations to the surgical departments from 2012 and more restrictive contract terms from 2015. We also observed an unexplainable regional variation in arthroscopy rates. Results from the present study suggest that poorly documented and potentially harmful surgical practices can be reduced through both professional guidance and administrative regulations.

Contributors RH, OT, JIB, MAR and AKA conceptualised the study. DN searched and provided data from the National Patient Registry. AKA provided expertise on arthroscopic procedures and coding. RH analysed the data and did the statistical analysis. RH prepared the initial manuscript draf, which was subsequently edited by all authors. All authors read and approved the final manuscript and agreed to submission. RH is the guarantor.

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Competing interests None declared.

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BIJLAGE 10: ARGUMENTATIE BVOT-BKS

Vertrouwelijk karakter

Versie 21.10.2022

BIJLAGE 11: BETROKKEN ZORGVERSTREKKERS

Aantal actieve zorgverstrekkers in 2019 (Bron: RIZIV)

Tabel 3 - Aantal actieve beroepsbeoefenaars met een geattesteerde praktijk per specialisme en per beroep - Evolutie 2012 -2021

Specialismen/Beroepen	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Jaarlijkse gemiddelde stijging
Heelkundige specialismen	***6.150***	***6.261***	***6.339***	***6.523***	***6.653***	***6.783***	***6.933***	***7.097***	***7.250***	***7.353***	***2,00%***
Anesthesiologie	1.802	1.835	1.867	1.931	1.976	2.053	2.096	2.155	2.207	2.253	***2,51%***
Acute geneeskunde en urgentie-geneeskunde	322	334	363	393	419	448	482	517	553	607	***7,30%***
Algemene heelkunde	1.285	1.301	1.296	1.294	1.312	1.316	1.339	1.334	1.355	1.341	***0,48%***
Orthopedie	949	970	973	1.002	1.023	1.030	1.053	1.092	1.100	1.104	***1,70%***

RIZIV, statistieken geneeskundige verzorging. Geraadpleegd op 19.09.2022 via https://www.riziv.fgov.be/nl/statistieken/geneesk-verzorging/2021/Paginas/aantal-individuele-zorgverleners.aspx

Aantal zorgverstrekkers per bevoegdheidscode voor de verstrekking 276636-276640 in verrichtingsjaar 2019 (Bron: Documenten P)

Bevoegdheidscode	Aantal zorgverstrekkers
048	1
100	1
140	4
210	2
480	571
489	5
494	5
520	1
999	2
Totaal	592

% orthopedisch chirurgen dat de verstrekking 276636-276640 aanrekende in verrichtingsjaar 2019

= (571 + 5 + 5)/1.092 = 581/1.092 = 0,53 = 53 %

Versie 21.10.2022

BIJLAGE 12: RAMING FINANCIËLE IMPACT

De ramingen zijn gebaseerd op het verrichtingsjaar 2019 en moeten desgevallend geactualiseerd worden!

In verrichtingsjaar 2019 werden 32.254 meniscectomieën 276636-276640 aangerekend, waarvan

- 13.289 meniscectomieën bij patiënten < 50 jaar (= 32.254 * 41,2 %)
- 18.965 meniscectomieën bij patiënten > 50 jaar (= 32.254 * 58,8 %)

Hypothese 1: voorstel DGEC - KCE - CEBAM (indicator 45 %)

Indien het aantal meniscectomieën bij patiënten ouder dan 50 jaar per kalenderjaar hoogstens 45 % van het totaal aantal meniscectomieën zou bedragen, dan betekent dit voor verrichtingsjaar 2019:

- 13.289 meniscectomieën bij patiënten < 50 jaar (cfr. supra) = 55 % van het totaal aantal meniscectomieën
- het berekende toegestane aantal meniscectomieën bij patiënten > 50 jaar bedraagt dan **10.873** meniscectomieën (= (13.289 / 55) * 45), dus **8.092** meniscectomieën minder op jaarbasis (= 18.965 - 10.873)
- het berekende totale aantal meniscectomieën bedraagt dan **24.162** meniscectomieën (= 13.289 + 10.873)

Hypothese 2: voorkeur BVOT - BKS (indicator 50 %)

Indien het aantal meniscectomieën bij patiënten ouder dan 50 jaar per kalenderjaar hoogstens 50 % van het totaal aantal meniscectomieën zou bedragen, dan betekent dit voor verrichtingsjaar 2019:

- 13.289 meniscectomieën bij patiënten < 50 jaar (cfr. supra) = 50 % van het totaal aantal meniscectomieën
- het toegestane aantal meniscectomieën bij patiënten > 50 jaar bedraagt dan eveneens **13.289** meniscectomieën, dus **5.676** meniscectomieën minder op jaarbasis (= 18.965 - 13.289)
- het berekende totale aantal meniscectomieën bedraagt dan **26.578** meniscectomieën (= 13.289 + 13.289)

Financiële impact

- hypothese 1 (indicator 45 %):
  - vergoeding 2019: € 259,94 → 8.092 * € 259,94 = 2.103.434,48 € (enkel heelkundige ingreep)
  - gemiddelde kost per ingreep (cfr. Actieplan handhaving in de gezondheidszorg 2018-2020): € 714 → 8.092 * € 714 = 5.777.688 €
- hypothese 2 (indicator 50 %):
  - vergoeding 2019: € 259,94 → 5.676 * € 259,94 = 1.475.419,44 € (enkel heelkundige ingreep)
  - gemiddelde kost per ingreep (cfr. Actieplan handhaving in de gezondheidszorg 2018-2020): € 714 → 5.676 * € 714 = 4.052.664 €

BIJLAGE 13: ONTWERP PUBLICATIE BELGISCH STAATSBLAD

ANNEXE	BIJLAGE

ROYAUME DE BELGIQUE

SERVICE PUBLIC FEDERAL SECURITE SOCIALE

Indicateur pour la ménisectomie arthroscopique chez les patients âgés de plus de 50 ans.

La loi relative à l'assurance obligatoire soins de santé et indemnités, coordonnée le 14 juillet 1994, article 73, § 3, offre entre autres au service d'évaluation et contrôle médicale de l' INAMI la possibilité de soumettre des propositions d'indicateurs au sein du Conseil Nationale de la Promotion de la Qualité.

Le comité de l'assurance soins de santé et le conseil général de l'INAMI, ainsi que le gouvernement ont choisi de développer une méthode d'intégration des objectifs de soins de santé dans les choix de l'assurance maladie, en combinaison avec un cadre budgétaire pluriannuel dynamique et une attention particulière à l'appropriate care – le bon soin à la bonne place au bon moment.

L'implémentation des indicateurs reste un des leviers pour y parvenir, avec l'objectif de générer des gains d'efficience par la réduction de l'inappropriate care. Les moyens ainsi libérés seront réinvestis dans les soins de santé.

Les indicateurs ne sont pas absolus, des exceptions motivées restent possibles. Dans ce sens, un indicateur est un seuil de justification.

Les indicateurs servent à mesurer l'usage approprié des moyens disponibles au niveau des soins de santé et sont scientifiquement étayée et rationnel.

KONINKRIJK BELGIE

FEDERALE OVERHEIDSDIENST SOCIALE ZEKERHEID

Indicator voor de arthroscopische meniscectomie bij patiënten ouder dan 50 jaar.

De wet betreffende de verplichte verzekering voor geneeskundige verzorging en uitkeringen, gecoördineerd op 14 juli 1994, artikel 73, § 3, biedt aan onder meer de dienst voor geneeskundige evaluatie en controle van het RIZIV de mogelijkheid om bij de Nationale Raad voor Kwaliteitspromotie voorstellen van indicatoren in te dienen.

Er werd door het comité van de verzekering voor geneeskundige verzorging en de algemene raad van het RIZIV alsook door de regering geopteerd om een methode voor de integratie van de gezondheidszorgdoelstellingen in de keuzes van de ziekteverzekering te ontwikkelen, dit in combinatie met een dynamisch meerjarig budgettair kader en meer focus op appropriate care – de juiste zorg op de juiste plaats op het juiste moment.
De implementatie van indicatoren blijft één van de hefbomen om hiertoe te komen, met als doel efficiëntiewinsten te genereren door het terugdringen van inappropriate care.
De aldus vrijgekomen middelen worden terug geïnvesteerd binnen de gezondheidszorg.

Indicatoren zijn niet absoluut, waarbij gemotiveerde uitzonderingen steeds mogelijk blijven. In die zin is een indicator een verantwoordingsdrempel.

De indicatoren moeten peilen naar doelmatiger gebruik van de beschikbare middelen binnen de gezondheidszorg en zijn wetenschappelijk gefundeerd en rationeel.

La valeur d'un indicateur est calculée à partir des réviews scientifique et analyses de données en concertation avec les organismes professionnelles et scientifique.

De waarde van een indicator wordt berekend op basis van wetenschappelijke reviews en data-analyses in overleg met de beroepsorganisaties en wetenschappelijke verenigingen.

NOTE

Les directives EBM sont réservées quant à la méniscectomie arthroscopique dans le cadre d'une maladie dégénérative du genou.
Une enquête nationale du SECM a démontré que 60 % des méniscectomies réalisées en Belgique le sont chez des patients de plus de 50 ans.
Une analyse de terrain limitée, avec accès aux dossiers, semblait confirmer l'inefficacité.
Une campagne de sensibilisation a été menée auprès des orthopédistes et des médecins généralistes pour leur rappeler les directives cliniques internationales (septembre 2019 - juillet 2020).
Une proposition du SECM (juin 2020) au sein du groupe de travail chirurgie du Conseil Technique Médical (CTM) visant à introduire une règle d'application dans la nomenclature des interventions arthroscopiques du genou n'a pas été retenue mais a donné lieu à une concertation avec les chirurgiens du genou.

Suite à cette concertation, la «Belgische Vereniging voor Orthopedie en Traumatologie (BVOT)» a consacré une session d'un symposium à ce sujet (automne 2020) et la «Belgian Knee Society (BKS)» a formulé une directive concernant le traitement des lésions dégénératives du ménisque médial (février 2021). Même après la campagne de sensibilisation du SECM et les actions de la BVOT et de la BKS, la proportion de méniscectomies chez les patients de plus de 50 ans n'a pas diminué de façon substantielle.
Compte tenu de l'EBM et du résultat limité des actions du SECM, de la BVOT et de la BKS, nous proposons d'introduire un indicateur. L'indicateur proposé vise à réduire l'utilisation inefficace de la méniscectomie chez les patients de plus de 50 ans et à encourager les dispensateurs de soins à aligner l'indication de cette intervention sur les directives cliniques.

Selon les directives cliniques, le traitement conservateur est préférable à l'arthroscopie dans le cas d'une maladie dégénérative du genou.
Le traitement arthroscopique n'est recommandé qu'après essai et échec du traitement conservateur.

L'arthroscopie dans le cas d'une maladie dégénérative du genou n'apporte pas de bénéfice immédiat mais augmente potentiellement le risque d'effets secondaires à court et à long terme.

Une analyse des données du National Patient Registry en Norvège a révélé une nette réduction globale des

NOTA

De EBM-richtlijnen zijn terughoudend voor arthroscopische meniscectomie bij degeneratief knielijden.
Uit een nationaal onderzoek van de DGEC bleek dat 60 % van de meniscectomieën in Belgie worden uitgevoerd bij patiënten ouder dan 50 jaar. Een beperkte terreinanalyse met dossierinzage wees in de richting van ondoelmatigheid.
Er werd een sensibiliseringscampagne verricht bij orthopedisten en huisartsen om hen te wijzen op de internationale klinische richtlijnen (september 2019 - juli 2020).
Een voorstel van de DGEC (juni 2020) binnen de werkgroep heelkunde van de Technisch Geneeskundige Raad (TGR) tot invoering van een toepassingsregel in de nomenclatuur voor arthroscopische knie-ingrepen werd niet weerhouden doch resulteerde in een overleg met de kniechirurgen.

Naar aanleiding van dit overleg wijdde de Belgische Vereniging voor Orthopedie en Traumatologie (BVOT) een sessie van een symposium aan dit topic (najaar 2020) en formuleerde de Belgian Knee Society (BKS) een richtlijn in verband met de behandeling van degeneratief mediaal meniscusletsel (februari 2021).
Ook na de sensibiliseringscampagne door de DGEC en de acties door de BVOT en de BKS is het aandeel meniscectomieën bij patiënten ouder dan 50 jaar niet substantieel verminderd.
Gelet op de EBM en het beperkte resultaat van de acties door de DGEC, de BVOT en de BKS stellen we voor om een indicator in te voeren.
De voorgestelde indicator beoogt het ondoelmatig gebruik van meniscectomie bij patiënten ouder dan 50 jaar te verminderen en de zorgverstrekkers er toe aan te zetten de indicatiestelling van deze ingreep af te stemmen op de klinische richtlijnen.

Volgens de klinische richtlijnen is bij degeneratief knielijden een conservatieve behandeling te verkiezen boven een arthroscopie.
Een arthroscopische behandeling wordt pas aangeraden na uitproberen en falen van een conservatieve behandeling.

Arthroscopie bij degeneratief knielijden geeft niet direct voordelen maar vergroot mogelijk wel het risico op bijwerkingen op zowel korte als lange termijn.

Bij een analyse van gegevens van het National Patient Registry in Noorwegen werd een duidelijke algemene vermindering van arthroscopieën van de knie

arthroscopies du genou entre 2012 et 2016 dans les hôpitaux ayant un financement public.
La plus forte baisse a été observée dans l'autorité sanitaire régionale du sud-est de la Norvège (South-Eastern Norway Regional Health Authority) et a coïncidé avec l'introduction de mesures administratives.
La proportion de patients âgés de 50 ans ou plus (hors réparation méniscale) est passée de 54 % en 2012 à 46 % en 2016.

Le nombre de méniscectomies pour 10.000 habitants dans d'autres pays est nettement inférieur qu'en Belgique.

Selon l'analyse de données effectuée à partir des Documents P (2018-2019 et 2020-2021), il apparaît que seulement 19 % des dispensateurs de soins (avec une moyenne d'au moins 10 interventions par an) répondent à l'indicateur de 45 % proposé.

INDICATEUR

La prestation avec le code de nomenclature 276636-276640, reprise à l'article 14k de l'annexe à l'arrêté royal du 14 septembre 1984 établissant la nomenclature des prestations de santé en matière d'assurance obligatoire soins de santé et indemnités, ne peut être attestée, chez les patients de plus de 50 ans, par année civile et par dispensateur de soins, que pour 45 % du nombre total de ces prestations.

vastgesteld tussen 2012 en 2016 in publiek gefinancierde ziekenhuizen.
De grootste daling werd gezien in de regionale gezondheidsautoriteit van Zuidoost-Noorwegen (South-Eastern Norway Regional Health Authority) en viel samen met de invoering van administratieve maatregelen.
Het aandeel patiënten van 50 jaar of ouder (exclusief meniscusherstel) viel terug van 54 % in 2012 naar 46 % in 2016.

Het aantal meniscectomieën per 10.000 inwoners in andere landen ligt verder beduidend lager dan in België.

Uit de data-analyse op Documenten P (2018-2019 en 2020-2021) blijkt dat slechts 19 % van de zorgverstrekkers (met gemiddeld minstens 10 ingrepen per jaar) beantwoordt aan de voorgestelde indicator van 45 %.

INDICATOR

De verstrekking met nomenclatuurcode 276636-276640, opgenomen in artikel 14k van de bijlage bij het koninklijk besluit van 14 september 1984 tot vaststelling van de nomenclatuur van de geneeskundige verstrekkingen inzake verplichte verzekering voor geneeskundige verzorging en uitkeringen, mag per kalenderjaar slechts voor 45 % van het totaal aantal verstrekkingen per zorgverlener bij patiënten ouder dan 50 jaar worden verricht."

Versie 21.10.2022

BIJLAGE 14: BEVESTIGING ONDERSCHRIJVING INDICATOR DOOR CEBAM EN KCE

Cebam
Belgian Centre for Evidence-Based Medicine · Cochrane Belgium

Leuven, 13 oktober 2022

Geachte

In het kader van de *Wet houdende diverse dringende bepalingen inzake gezondheid van 18 mei 2022* en volgens de bepalingen in het *MB van 30 mei 2022* heeft het Belgisch Centrum voor Evidence-Based Medicine (Cebam) haar medewerking verleend bij het formuleren en onderbouwen van indicatoren die doelmatige zorg ten goede komen. Meer in het bijzonder werden er drie indicatoren uitgewerkt die worden neergelegd bij het NRKP. Ze worden hieronder elk afzonderlijk vermeld.

(1) CEBAM onderschrijft hierbij mee het voorstel van indicator met referte 2022/DGEC/002 conform artikel 73 § 3 van de GVU-wet:

"Een periode van minimaal 3 volledige kalendermaanden tussen de eerste raadpleging van de patiënt met de bariatrische chirurg en het tijdstip van de eigenlijke bariatrische ingreep wordt voor alle patiënten wettelijk vastgelegd. De 3 volledige kalendermaanden beginnen te lopen vanaf de 1^{e} dag van de kalendermaand die volgt op de raadpleging. Bij hoge medische nood kan hiervan gemotiveerd worden afgeweken."

(2) CEBAM onderschrijft hierbij mee het voorstel van indicator met referte 2022/DGEC/001 conform artikel 73 § 3 van de GVU-wet:

"De verstrekking met nomenclatuurcode 276636-276640, opgenomen in artikel 14k van de bijlage bij het koninklijk besluit van 14 september 1984 tot vaststelling van de nomenclatuur van de geneeskundige verstrekkingen inzake verplichte verzekering voor geneeskundige verzorging en uitkeringen, mag per kalenderjaar slechts voor 45 % van het totaal aantal verstrekkingen per zorgverlener bij patiënten ouder dan 50 jaar worden verricht."

(3) CEBAM onderschrijft hierbij mee het voorstel van indicator met referte 2022/DGEC/003 conform artikel 73 § 3 van de GVU-wet:

"De maximale incidentie van ambulant urgent uitgevoerde NMR-onderzoeken wordt vastgelegd op 5 urgente NMR-onderzoeken per 1000 uitgevoerde NMR-onderzoeken per kalenderjaar.
Het betreft de NMR-verstrekkingen die gevat worden door de nomenclatuurcodes 599572 en 599594 opgenomen in artikel 26 § 1 en § 9 van de bijlage bij het koninklijk besluit van 14 september 1984 tot vaststelling van de nomenclatuur van de geneeskundige verstrekkingen inzake verplichte verzekering voor geneeskundige verzorging en uitkeringen."

Voor Cebam

Patrik Vankrunkelsven, directeur.

13/10/2022

Federaal Kenniscentrum voor de Gezondheidszorg
Centre Fédéral d'Expertise des Soins de Santé
Belgian Health Care Knowledge Centre

Brussel, 19 oktober 2022

Geachte

In het kader van de *Wet houdende diverse dringende bepalingen inzake gezondheid van 18 mei 2022* en volgens de bepalingen in het *MB van 30 mei 2022* heeft het Federaal Kenniscentrum voor de Gezondheidszorg (KCE) haar medewerking verleend bij het formuleren en onderbouwen van indicatoren die doelmatige zorg ten goede komen. Meer in het bijzonder werden er drie indicatoren uitgewerkt die worden neergelegd bij het NRKP. Ze worden hieronder elk afzonderlijk vermeld.

(1) Het KCE onderschrijft hierbij mee het voorstel van indicator met referte 2022/DGEC/002 conform artikel 73 § 3 van de GVU-wet:

"Een periode van minimaal 3 volledige kalendermaanden tussen de eerste raadpleging van de patiënt met de bariatrische chirurg en het tijdstip van de eigenlijke bariatrische ingreep wordt voor alle patiënten wettelijk vastgelegd. De 3 volledige kalendermaanden beginnen te lopen vanaf de 1^{e} dag van de kalendermaand die volgt op de raadpleging. Bij hoge medische nood kan hiervan gemotiveerd worden afgeweken."

(2) Het KCE onderschrijft hierbij mee het voorstel van indicator met referte 2022/DGEC/001 conform artikel 73 § 3 van de GVU-wet:

"De verstrekking met nomenclatuurcode 276636-276640, opgenomen in artikel 14k van de bijlage bij het koninklijk besluit van 14 september 1984 tot vaststelling van de nomenclatuur van de geneeskundige verstrekkingen inzake verplichte verzekering voor geneeskundige verzorging en uitkeringen, mag per kalenderjaar slechts voor 45 % van het totaal aantal verstrekkingen per zorgverlener bij patiënten ouder dan 50 jaar worden verricht."

(3) Het KCE onderschrijft hierbij mee het voorstel van indicator met referte 2022/DGEC/003 conform artikel 73 § 3 van de GVU-wet:

"De maximale incidentie van ambulant urgent uitgevoerde NMR-onderzoeken wordt vastgelegd op 5 urgente NMR-onderzoeken per 1000 uitgevoerde NMR-onderzoeken per kalenderjaar.
Het betreft de NMR-verstrekkingen die gevat worden door de nomenclatuurcodes 599572 en 599594 opgenomen in artikel 26 § 1 en § 9 van de bijlage bij het koninklijk besluit van 14 september 1984 tot vaststelling van de nomenclatuur van de geneeskundige verstrekkingen inzake verplichte verzekering voor geneeskundige verzorging en uitkeringen."

Voor het KCE,

Christophe Janssens
Adjunct Algemeen Directeur a.i

Marijke Eyssen
Algemeen Directeur a.i.