

Summary

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 nonoperative 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

Reprint of: Surgical management of degenerative meniscus lesions: the 2016 ESSKA meniscus consensus[☆]

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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

[☆] This paper was first published in the journal Knee Surgery Sports Traumatology Arthroscopy (KSSTA) and must be cited as Beaufils, P., Becker, R., Kopf, S. et al. Knee Surg Sports Traumatol Arthrosc (2017) 25: 335. <http://dx.doi.org/10.1007/s00167-016-4407-4>

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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 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

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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 nonoperative 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

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