

# The pertinent question in treatment of unicompartmental osteoarthritis of the knee: high tibial osteotomy or unicondylar knee arthroplasty or total knee arthroplasty

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Published online: 28 February 2017

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The current issue deals with the optimal surgical treatment of isolated femorotibial osteoarthritis (OA) using either high tibial osteotomy or unicondylar knee arthroplasty.

A growing number of publications have highlighted the need and interest in a more individualised and better targeted treatment of the osteoarthritic knee.

Some surgeons argue that as OA is a systemic disease the monocompartmental treatment of the osteoarthritic compartment is not sound. They further question the existence of a monocompartmental OA.

However, most of our patients in our daily clinical practice present with isolated loss of cartilage, mainly at the

medial femorotibial compartment, as most patients suffer from medial compartment OA. There is a clear correlation between symptomatic medial OA and varus deformity. In a normally aligned knee 60–70% of the weight bearing load is already transmitted through the medial compartment. Varus alignment at baseline is associated with a fourfold increased likelihood of OA progression. In addition, there is a direct correlation between clinical symptoms and malalignment [3, 8].

The study by Sheth et al. published in the issue showed that there is a 10-year survivorship of 67% after HTO [4]. The authors further identified factors which negatively influence survival such as higher age, female sex, higher comorbidities and prior meniscectomy. However, in another study patients' age did not influence clinical outcome in a Japanese population [2]. One of the articles in the current issue did also show that HTO offers good activity of the patients even after 10 years [12]. Saier et al. reported significant improvement in quality of life after HTO [7]. The authors further pointed out that psychological distress shows a significant negative impact on return to work.

A recent meta-analysis of the clinical outcome after HTO and UKA showed better results in knee function after UKA but no difference in the knee score [1]. However, the indication for one or the other was not specified. The indication for HTO or UKA is often debated. The indication should among other criteria depend on the cause of varus deformity. If the deformity is caused due to cartilage loss one may rather consider UKA. Patients presenting with a varus morphotype may better perform a medial opening wedge HTO and unload the overloaded medial osteoarthritic compartment. As already mentioned above, there is a general correlation of the severity of varus deformity and clinical symptoms [3]. However, in another article a tibial inclination angle of up to 3° did not show significant

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impact on clinical outcome [5]. Increased tibial varus angle of more than 5° did not affect clinical outcome [10].

The total number of UKA has increased over the last decade. The reported 10 year's survival rates after UKA range between 91 and 94% [6, 9].

Studies investigating the activity and sports level after UKA found a significant postoperative improvement, which is better in patients after UKA than TKA [11]. It has also been shown that the knee joint is more likely to be forgotten after UKA than TKA [13].

The articles in the current issue show that both UKA and HTO are suitable well-established options for treatment of monocompartmental OA, if the indication is correct. Optimal patient selection is a key factor for outcome and reduction of early failure rates.

The current issue will provide you with a tremendous amount of information which might help to identify the optimal patient for each procedure.

The implantation of a total knee arthroplasty should be considered as the last surgical option in the management of patients suffering from OA.

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