

Innovations in primary unicompartmental knee surgery and unicompartmental to total knee revisionsurgery and unicompartmental to total knee revision surgery

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Chapter 10

Summary and valorisation



SUMMARY AND VALORISATION

Medial unicompartmental knee arthroplasty (UKA) is a known procedure for medial osteoarthritis of the knee with good results. Recently innovations were introduced to improve patient satisfaction and survival rates after primary UKA as well UKA to TKA revision surgery. First of all this dissertation discusses the short term results of cementless fixation in primary Oxford UKA surgery and positioning of the components using patient specific guiding (PSG) in primary Oxford UKA Surgery. Additionally new insights in decision making for UKA to TKA revision surgery are discussed with results of UKA to TKA revision surgery for specific cases. Also an innovative technique using PSG for UKA to TKA revision surgery is presented. Finally it is demonstrated that despite these innovations in primary UKA surgery as well as UKA to TKA revision surgery, the surgeon is still a key factor during these procedures.

INNOVATIONS IN PRIMARY UKA SURGERY

UKA components are usually fixated to the bone using bone cement. An innovation using cementless fixation for these components, with reported good results by the designing team was evaluated prospectively. The short term results confirm the results reported by the designing team regarding the cementless components. Long term results are not known yet. Cementless fixation in primary Oxford UKA surgery thus seems reliable and safe to use.

Next innovation in primary Oxford UKA surgery is component positioning using PSG. A prospective study was performed which shows that the guide that translates the position of the component on the preoperative plan to the actual position in the patient is accurate. Proper planning is important to prevent re-cuts, which can cause deviations of the definitive component position compared with the planned position. The second study regarding this topic is a cohort study in which PSG is compared with conventional component positioning. The results show that no statistical significant difference is seen between both groups. Both studies confirm that PSG is safe, reliable and accurate in Oxford UKA surgery.

INNOVATIONS IN UKA TO TKA REVISION SURGERY

Although results of primary UKA surgery are good, some patients have problems and need UKA to TKA revision surgery. Next to loosening, fracture and bearing luxation, pain of unknown origin is a complaint for which revision surgery is performed. Since a UKA in situ seems not to be an endpoint, pain of unknown origin can be reason for revision to TKA. A retrospective multicentre study was performed and shows that in case of pain of

unknown reason revision surgery is rather not the solution for the problem and that pain is often still present after revision surgery. It is thus important to inform the patient properly and advise against revision surgery in these cases. A second innovation in UKA to TKA revision surgery is PSG. A prospective study was performed and the results show that PSG can be an aid in this technically demanding procedure in order to put the definitive new components in the proper position.

Despite all these innovations the surgeon is still the key factor. Two case reports show that this is the case during primary UKA surgery as well as UKA to TKA revision surgery.

VALORISATION

The studies regarding primary UKA surgery show orthopaedic surgeons that short term results after cementless fixation of Oxford UKA components are good in a non-designer orthopaedic centre and that the technique thus can be used in a safe way by other non-designer orthopaedic surgeons. Long-term results however are not yet reported by non-designer groups. Both the studies concerning PSG show that in primary Oxford UKA surgery PSG is a safe, reliable and accurate tool with final results regarding component position comparable with conventional instrumentation.

The study regarding decision making and outcome of UKA to TKA revision surgery is important for orthopaedic surgeons as well as patients with pain of unknown origin after UKA surgery. Revision surgery shows good results when a cause for the complaints is present before the surgery but in case of pain of unknown origin, revision surgery is rather not the solution for the pain.

Regarding PSG in UKA to TKA revision surgery, the reported results are important for orthopaedic surgeons since this is an introduction of a new technique, which makes this potentially difficult procedure less demanding.

The final remark that despite all these innovations the surgeon is still the key factor in primary UKA surgery as well as UKA to TKA revision surgery is important for orthopaedic surgeons that use new techniques.