



Surgical Approaches in TKA

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Attention to the Technique

Surgical Approach

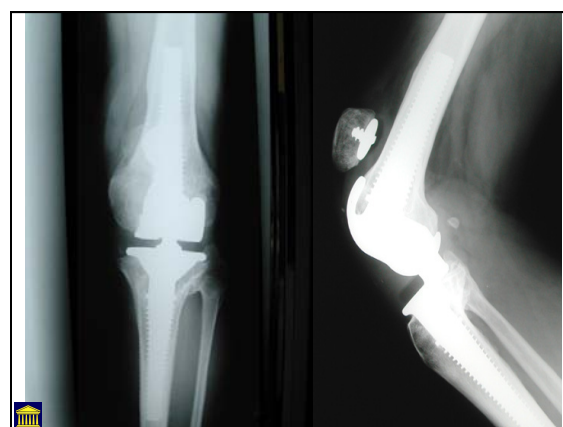
- Too small incision : poor exposition + cutaneous necrosis
- Multiple incisions : risk of cutaneous necrosis




Attention to the Technique

Surgical Approach

- Too small incision : poor exposition + cutaneous necrosis
- Multiple incisions : risk of cutaneous necrosis
- Cicatrisation over the ATT and patella : bonne sœur
- Difficulties to luxate the patella : arrachement of patella tendon



Skin incision




Best =
a: median

Figure 1. Les différents incisions cutanées. a) médiane ; b) paramédiane interne ; c) interne de Gerace ; d) paramédiane externe.

Introduction: Surgical Approaches

CUTANEOUS INCISION

- MEDIAL PARAPATELLAR
- MIDVASTUS
- SUBVASTUS
- QUADRICEPS SNIP
- OSTEOTOMY of ATT
- LATERAL APPROACH



Approaches

- Subvastus
- Midvastus
- Medial-Parapatellar
- Quad-Sparing

Lateral approach

- Valgus knee
- attempt to minimize soft tissue damage
- preserve quadriceps muscle function

Knee Approaches

- Medial parapatellar
- Tri-vector
- Midvastus
- Subvastus

Medial Parapatella Approach

- Pro's
 - Standard TKR approach for most surgeons
 - Simple to evert the patella
 - Best visualisation
- Cons
 - Least "Quad sparing"
 - Invasive, cuts into the Quadriceps tendon
 - Higher lateral patella release rate reported
 - Longer healing time
 - Rehabilitation takes longer

Mid-Vastus Approach

- Pro's
 - Surgeon can choose where to split the capsule
 - Do not need to mobilise the whole of Vastus Medialis
 - Good visualisation of patella tracking
 - Lateral patella release rarely seen
 - Rehabilitation shorter and easier

Sub-Vastus Approach

- Pro's
 - Least trauma to extensor mechanism
 - Easier rehabilitation compared to medial parapatellar procedure
 - Lateral patella release rarely seen
- Cons
 - Not very easy to extend the capsular incision
 - More difficult to perform in large and heavy muscled males
 - Can not check the patella tracking
 - Risk of patella tendon evulsion

Quadriceps Snip - Osteotomy of ATT

The diagrams illustrate the surgical approach for a quadriceps snip and osteotomy of the ATT. The first diagram shows the quadriceps tendon being snipped. The second diagram shows the resulting gap in the tendon. The third diagram shows the osteotomy of the ATT, which is the tunnel through which the quadriceps tendon passes to reach the knee joint.

Lateral Approach : Peter Keblish

Some technical points

The slide features two photographs. On the left, an elderly patient is shown standing with a walker, demonstrating the functional outcome of the surgery. On the right, a photograph of Peter Keblish, the surgeon associated with this approach, is shown.

Lateral Approach

The diagrams show the lateral approach to the knee joint. They illustrate the incision, the dissection of the soft tissues, and the exposure of the knee joint from the lateral side.

Lateral Approach : Technique

- Median incision
- Lateral arthrotomy
 - Direct to Gerdy
 - Double layer technique

The slide includes several images illustrating the technique. On the left, a photograph shows a patient's knee with a median incision. On the right, a photograph shows a lateral arthrotomy. A diagram on the far right shows the double layer technique for closing the arthrotomy. A surgical photograph at the bottom shows the final closure of the knee joint.

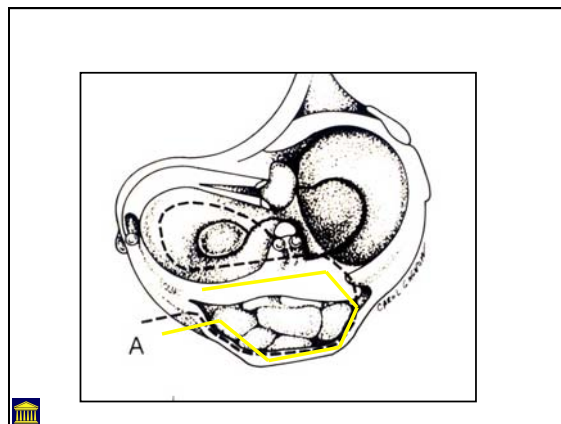
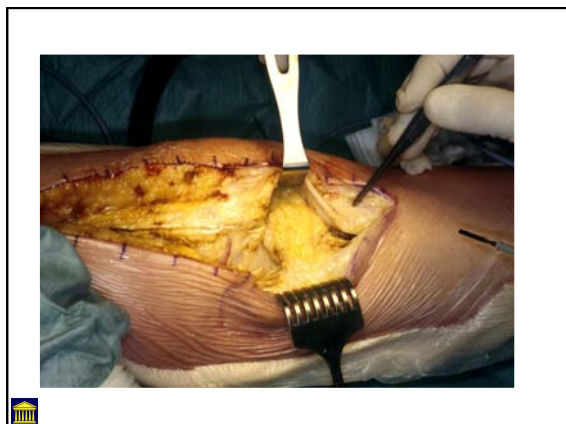
Release of lateral retinaculum

The photographs show the surgical release of the lateral retinaculum. The first photograph shows the lateral retinaculum being cut with scissors. The second photograph shows the resulting release of the retinaculum, which allows for a more neutral alignment of the knee joint.

Double layer technique

Permits an easy and complete closure after correction of the valgus

The slide includes two diagrams and a photograph. The diagrams show the double layer technique for closing the knee joint, illustrating the use of two layers of suture to ensure a complete and secure closure. The photograph shows the final closure of the knee joint after the double layer technique has been applied.



Summary : lateral approach

Technique for « ALL » Genu Valgum

- **EXTERNAL**(direct)
- First **RELEASE** of structures retracted in **EXTENSION** (capsule and fascia lata)
- Permits correct **STABILITY** in extension and flexion.
- Permits a mobile rotatory tibial insert without increased risk of luxation

