



Medial Arthrotomy. Options

- MEDIAL
- MIDVASTUS
- SUBVASTUS



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First described by Engh et al. as an alternative to the classic Von Langenbeck capsular incision.

Advantages are similar to subvastus approach.

The disadvantage of the midvastus approach compared with the median parapatellar approach is some difficulty with full exposure of the joint.

MIDVASTUS APPROACH

MIDVASTUS

It runs between the fibers of VML and VMO

Engh GA, Ammmeen DJ The midvastus approach to the knee. The Journal of Knee Surgery: 2003

Maestro A et al. The midvastus surgical approach in the knee arthroplasty Int Orthop. 2000

Haas SB et al. Minimally Invasive Total Knee Replacement Through Mini Midvastus approach. *Clin Orthop.* 2004





MIDVASTUS vs SUBVASTUS

Some surgeons believe that the subvastus approach completely avoids damage to the quadriceps mechanism and therefore would be associated with improved muscle function when compared with midvastus.

In this prospective study no substantive differences have been found between the two approaches.

Mini Medial Approaches Advantages / disadvantages

- <u>Subvastus approach</u>
- <u>Midvastus approach</u>
- Intact extensor mechanism
 Decreasing pain
 More limited (MIS)



- Preserve genicular art.
 blood supply to the patella
- Contraindicated in limited preoperative flexion
- Postoperative hematoma



A comparison of subvastus and midvastus approaches in minimally invasive total knee arthroplas Bonutti PM et

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Extended Approaches Objectives

- In some cases an extended approach might be needed
- Achieving wide exposure while protecting the extensor mechanism



Proximal or distal

Extended Approaches Proximal exposures

- Coonse-Adams
- Quad Snip
- Quadplasty



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Proximal Exposures Problems

- ↓ range of motion
- delay starting resistance exercises
- provokes an extensor lag



Extended Approaches Distal exposures • Tubercle Osteotomy

Tibial Tubercle Osteotomy

- adequate osteotomy segment including the entire insertion of the patella tendon (6cm)
- the lateral periosteal hinge is maintained and adds to the stability of the construct
- a minimum of 3 wire sutures are passed medially through drill holes to secure the osteotomy segment



Tibial Tubercle Osteotomy

- adequate osteotomy segment including the entire insertion of the patella tendon (6cm)
 the lateral periosteal
- hinge is maintained and adds to the stability of the construct
- a minimum of 3 wire sutures are passed medially through drill holes to secure the optodemy sequent



Tibial Tubercle Osteotomy

This method of fixation relies upon an

lequate osteotomy segment as well as a solid bone fixation

Be careful!

- adequate osteotomy segment including the entire insertion of the patella tendon
- the lateral periosteal hinge is maintained and adds to the stability of the construct

Tibial Tubercle Osteotomy

Complications

 a minimum of 3 wire sutures are passed medially through drill holes to secure the osteotomy segment



Tibial Tubercle Osteotomy Advantages

- bone to bone fixation
- permits early rehabilitation
- restores quadriceps excursion and strength





• If all the TT has been avulsed, a stronger fixation will be preferred



To sum up

- Sub and Midvastus approaches provide excellent exposure and allows quicker advancement in rehab after TKR
- Particularly useful when using MIS
 TT osteotomy may be useful in revision cases to avoid extending ext mechanism injuries

Both exposures have a learning curve

Thank You!!!

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