Preop stiff knee : which expectations Soft tissue release Sébastien Parratte, X Flecher, JM Aubaniac, JN Argenson

Sainte Marguerite Hospital, Marseille, France www.chirurgie-arthrose.com



4thAdvanced Course on Knee Surgery

January 22nd - 27th 2012





Institut du Mouvement et de l'appareil Locomoteur

We can not release all the soft tissue



Etiology

« Where the hand of the man already put his foot »

Post-traumatic Post-osteotomy Historical arthritis

Secondary arthritis hemophilia, rhumatoid arthritis



"Just enough but not too much"



Alignment
Fixation

Augment and stem



Goals ?

Articular line Patellar position AP and Sky-line



1: Lack of flexion and soft tissue « Anterior»



Quad Patellar tendon

solutions

- parapatellar+/quadriceps snipe
- 2. Med and lat Subvastus+/-Peel

3. ATT osteotomy



Pagnano et al, CORR 2006

Clin Orthop Relat Res. 2011 Jan;469(1):146-53. The peel in total knee revision: exposure in the difficult knee. Lavernia C, Contreras JS, Alcerro JC.

2. Lack of extension and soft tissue « Posterior »



Capsule Muscles => Genu valgum

Solutions Time and 3 tools

DEBOUT

Lamina spreader Osteotom Rugine



Wath can we expect after fracture ?



Orthopaedics & Traumatology: Surgery & Research (2011) 97, 28-33

Available online at ScienceDirect www.sciencedirect.com Elsevier Masson France EM consulte www.em-consulte.com



Limited gain

ORIGINAL ARTICLE

Total knee replacement in post-traumatic arthritic knees with limitation of flexion

P. Massin^{a,*}, M. Bonnin^b, S. Paratte^c, R. Vargas^b, P. Piriou^d, G. Deschamps^e, The French Hip Knee Society (SFHG) 56, rue Boissonade, 75014 Paris, France



Not shy but modest

Total knee replacement following intra-articular malunion.

Parratte S, Boyer P, Piriou P, Argenson JN, Deschamps G, Massin P; SFHG (French Hip and Knee Society). Orthop Traumatol Surg Res. 2011 Oct;97(6 Suppl):S118-23. Epub 2011 Aug 26. PMID: 21872547 [PubMed - in process] Related citations

Multicentric retrospective study Post-traumatic arthritis Intra-articular malunion 74 TKA

Surgical technique

Specific action for the stiffness

• Bone: 12% (10/74)

- 7 distal femoral cut
- 2 on tibial cut
- 1 tibial slope

Soft tissues: 22% (16/74)

- 6 posterior arthrolysis
- 6 lateral retinaculum section
- 2 MCL realease and one lateral
- 1 Judet

Complications

23/74 => 31% :

Avulsion of patellar tendon : 4 cases

Infections : 4 cases

Stiffness: 5 cases

Instability:1 cas



Aseptic loosening :1 case

Arthroplastie du genou sur cal vicieux intra-articulaire

Clinical results IKS Knee and Function scores



Arthroplastie du genou sur cal vicieux intra-articulaire

Which expectation after infection

- 57 TKA staphylococcus infection
- Minimum five years

• Age: 71 ± years

- 26.3% multiple surgeries (mean 3.53)
- Multiple risk factors +++

Functionnal results

Knee Society score – Knee : 56.3 – Function : 50.3 KOOS



SF 12 MCS	56.7
SF 12 PCS	36.5

Aseptic Revision

Clin Orthop Relat Res (2011) 469:146–153 DOI 10.1007/s11999-010-1431-4

SYMPOSIUM: PAPERS PRESENTED AT THE ANNUAL MEETINGS OF THE KNEE SOCIETY

The Peel in Total Knee Revision

Exposure in the Difficult Knee

MONTAG

Carlos Lavernia MD, Juan Salvador Contreras MD, Jose Carlos Alcerro MD

WOMAC			
Function	40.24 (± 2.71)	$10.3 (\pm 1.61)$	≤ 0.0001
Pain	$10.54 (\pm 0.593)$	$2.13 (\pm 0.434)$	≤ 0.0001
Stiffness	$3.16 (\pm 0.281)$	$0.63 (\pm 0.174)$	≤ 0.0001
Total	53.9 (± 2.31)	$13.1 (\pm 2.11)$	≤ 0.0001
ROM (°)			
Knee active extension	$9.84 (\pm 1.88)$	3.5 (± 1.46)	0.002
Knee passive extension	$6.4 (\pm 1.54)$	$1.24 (\pm 0.569)$	≤ 0.0001
Knee active flexion	89.56 (± 2.71)	99.56 (± 2.34)	0.001
Knee passive flexion	95.37 (± 2.87)	108.79 (± 2.06)	≤ 0.0001
Flexion contracture	$6.3 (\pm 1.52)$	$0.92 (\pm 0.458)$	≤ 0.0001
Extensor lag	3.49 (± 1.06)	2.59 (± 1.37)	0.5



Seminars in Arthroplasty

The Stiff Total Knee Arthroplasty: A Contemporary Approach

Mark W. Pagnano, MD, and Sebastien Parratte, MD



Results of Revision TKA for Stiffness

- Modest gains in ROM and function
- 17-30 degree improvement in arc of motion
- Most knees still can not flex > 90 degrees

- *Kim et al JBJS 86A, 2004*
- Mont et al. CORR 446, 2006
- Keeney et al CORR 440, 2005
- Ries et al CORR 380, 2000
- Williams et al CORR 331, 1996
- Haidukewych et al J Arthroplasty 20, 2005
- Christenson et al J Arthroplasty 17, 2002



Implant? => Release

Stability

Alignement

• Wear

Pr. J.M. Aubaniac, 1972

Reductibility ?







NEUTRAL

VALGUS

VARUS

LPS flex



LPS flex + tige

C C K



RHK



Step 2=> Approach

3)Lateral parapattellar Arthrotomy if required

2) Subvastus arthrotomy

1) Anterior midline incision

Subvastus Arthrotomy : « follow the yellow ligne »





Approach

Subvastus + work in extension and then flexion





Notch soft tissue Release

Cut everything



Cuts remains essential



After the cuts



Posterior release



Go behind the tibia as well if required













TKA Revision: Work in extension











Sometimes limited options Extensive release



[H]

D





Rotating hinge Extensive release

















Conclusion

 Not shy but modest and prepared to the worst

• Frontal, sagittal and axial release

Soft tissues <> implant choice

Stability is also a key factor

Contactez nous | Plan du site



Centre de Chirurgie de l'Arthrose

Présentation

Hospitalisation

Informations patients Accès au centre

centre Liens utiles

S Collaborations scientifiques

Vous êtes ici >> accuel

Nos missions : Soigner, Enseigner, Chercher

Les importants progrès réalisés dans le domaine des prothèses de hanche et de genou permettent aujourd'hui une bonne récupération de la fonction des articulations touchées par l'arthrose, avec une reprise satisfaisante et durable des activités sportives et de loisirs.

>> Lire la suite



Actualités Médicales

Restauration de l'anatomie de la hanche grâce à la planification...

o Chirurgie mini-invasive et grande flexion dans les prothèses totales du genou...

O Chirurgie de la hanche et du genou assistée par ordinateur...

o Pourquoi une prothèse totale de genou adaptée au sexe léminin?...

o Prothèses de hanche et de genou : moins de 3% de transfusion.









CENTRE DE CHIRURGIE DE l'ARTHROSE - SERVICE DE CHIRURGIE ORTHOPEDIQUE ET TRAUMATOLOGIE, 270 bd sainte marguerite 13009 Marseille Contact : contact@chirurgie-arthrose.com Tél : (+33)4 91 74 50 11 - (+33)4 91 74 50 12 Fax : (33)4 91 74 15 91 | Mentions légales

©2006 - CENTRE DE CHIRURGIE DE l'ARTHROSE - Réalisation Answeb