ORTHOPAEDIC PRESENTATION:
ACL Intra-articular Reconstruction + Lateral Tenodesis

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ACL
Intra-articular Reconstruction + Lateral Tenodesis

**Modified Ellison Procedure**
FUNCTIONAL STABILITY

• Eliminate or reduce the size and speed of the pivot / jerk = ‘lateral femoro-tibial translocation’.

• Deal with menisco-chondral pathology = IDK...

• Regain muscle [Quads/VMO & hamstring]. Strength, Endurance and Co-ordination.
“Go around again!”

MIRACLE SURGERY

BIOLOGY
COMMON GROUND
"CAPTURE’... the knee/ joint

- This is a ‘popularised’ term used to describe problems; associated with = ‘lateral tenodesis’...
- The findings of increased stiffness, patellofemoral problems and functional disability... in series studied... comparing... Intra-articular graft in isolation... and those with combined... intra-articular and lateral tenodesis!
- This lead non-thinking ‘sheep’ to follow the more outspoken ‘leaders’ and abandon completely a very useful procedure...
- AIM is to ‘reinforce’ the stretched or lax... mid 1/3rd lateral capsule!
- Best addressed by the Ellison type tenodesis
- With ITB strip rigidly fixed ‘only’ distally- & preservation of posterior ITB & Kaplan fibres
‘NOBODY HAS MASTERED ANYTHING’

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‘YOU CANNOT BEAT THE BIOLOGY’

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‘THERE IS NO RECIPE BOOK FOR...’
INJURY
LIGAMENTS = ACL / PCL
MCL / LCL COMPLEX
MENISCAL
CHONDRAL
PATELLA INSTABILITY +/- OSTEO-
CHONDRAL

RESPONSE
PAIN / ANXIETY
QUADS INHIBITION
2*WASTING / IMBALANCE
= PATELLO-FEMORAL
+/- STIFFNESS

INJURIOUS

REALISTIC
EXPECTATIONS
‘COME TO GRIPS’
= PREPARATION

DEFINITIVE TREATMENT
= TYPE
= TIMING OF
‘APPROPRIATE SURGERY’

AGE
ACTIVITY
SPORT / WORK
PROTOPLASM
PSYCHE

ALIGNMENT-
VARUS / VALGUS
ROTATION

PAIN / ANXIETY
QUADS INHIBITION
2*WASTING / IMBALANCE
= PATELLO-FEMORAL
+/- STIFFNESS

INFLAMMATORY

‘blood’

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“ASSOCIATED” A.C.L.
- CAPSULE
- COLLATERAL LIGAMENT
- MENISCI
- ARTICULAR SURFACE

SURGERY

INAPPROPRIATE

Type

Timing

= DISASTER
‘Functional’ graft size limited by - IC. dimensions = ROM = attachments
THE GRAFT

“COLLAGEN SCAFFOLD”
Operation = Collagen scaphold ... technical ‘masterpiece’!

But then need to wake patient = a whole new unpredictable ball game
HEAL BY SCAR
NOT
REPLICATION

PHYSIOLOGICAL LOAD
produces
FUNCTIONAL ADAPTATION

NOT THE SAME
- Structure
- Biomechanics

MOTION - MOULDS

MULTIPLICITY
OF FACTORS
• INTRINSIC
• EXTRENISTIC
Indication for any Surgery = is always ‘relative’...

‘Art of’ – patient selection

Type and timing of ‘appropriate surgery’....
THE PROTOPLASM
'MATERIALS'
ARE DIFFERENT
Lateral side / 2*restraint

298 Dissection of the Knee, medial aspect

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Relative Contra-indications

- Pain!!
- Difficult or no... Quads activation... Inhibition
- Range of movement deficit
- Patellofemoral... instability and/or significant malalignment
- Less demand
- Older age
- i.e. those with increased risk of stiffness and problems mobilising
- And/or PF problems
Preparation for ACL + Lateral tenodesis

MUST HAVE QUADS ACTIVATION AND GOOD RANGE OF MOVEMENT

BE AWARE LONGER LATERAL WOUND / SCAR

INITIALLY ..... LATERAL TIGHTNESS AND\
Anatomy...
* Boney, bi-convex... slide / glide... soft tissues of lateral side

Aim: re-inforce the mid 1/3rd Lateral Capsule

Not to ‘Capture’ the knee??

Rigid fixation at femoral and tibial ends. Must result in abnormal kinematics. i.e.
* Stretch / tear of graft or fixation
  * Reduced / limitation of motion
  * Abnormal articular / chondral compressive or shear forces.
Surgical Technique

• Identify width of ITB & Posterior ligamentous ..Kaplan fibres.
• Determine ... width of tenodesis and gerdes tubercle bone
• Isolate proximal Lateral collateral ligament... Capsule and vessels!
• Passage of graft under lat. Ligament
• Gerdes - Bone - bone fixation = in mild external rotation and no tension
• Suture... graft / lateral ligament / capsule... haemostasis
• ITB closure... Without undue ‘Tension’... Continues / running suture... there is no need for complete closure
• VARIABILITY... Individual variations
Complications

- Bleed / Haematoma... Peri-ligament / capsular vessels
- Gerdes tubercle... prominence = boney overgrowth; staple
- Patella tracking... Quads / VMO imbalance... PF malalignment
- ITB tension... suture / closure / defect
- Surgical Scar
- Kneeling!!
Other factors to consider...

• Lateral scar
• Aware of lateral tightness... initial discomfort!!
• Must gain early Quads ‘activation’
• Need to take rehab more cautiously ‘initially’, i.e. for the first 6 to 12 weeks. Goal oriented =
• Experienced physio re patella mobilising and taping
• Cycle ‘once gained’; extension to (or close to) neutral and flexion to 110°
• Start indoors... then outside
The OPERATION
The PATHOLOGY
The PATIENT
The MANAGEMENT
"ACTIVE BIOLOGICAL" PHASE 0 - 3 - 12
PHYSIOLOGICAL LOAD produces FUNCTIONAL ADAPTATION
PRECONCEIVED IDEAS
HURRY UP DOC!
THE GAME STARTS IN 20 MINUTES.
“COMPOSITE”
TENDON and SCAR
Rehab – inappropriate / inadequate / incomplete !!
“Go around again!”

MIRACLE SURGERY

BIOLOGY
COMMON GROUND