Hip Arthroscopy:
External Fixation for Hip Distraction

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Hip Arthroscopy

• 10 min.
• Goals:
  – Complications of Traction
  – Invasive Distraction to avoid traction Complications
  – Invasive Distraction for NON Distractable Hips
  – Examples
Hip Arthroscopy- Traction Table

- With Traction IN ANY POSITION (Sup&Lat):
  - Intra articular compartment
  - Traction necessary 300-500 N!!!

CAVE: COMPLICATIONS - TENSIOMETER
Hip Arthroscopy - Traction Table

• With Traction: Intra articular compartment
• Traction necessary 300-500 N!!!
CAVE: Monitor traction forces on traction table -> TENSIOmeter (USA)
Hip Arthroscopy- Traction Table
• With Traction: Intra articular compartment

• CAVE: COMPLICATIONS
  (TIME LIMIT 75-90 min.) – LARGE POST

• Study Australia (Haynes): ON TRACTION TABLE: ENMG lesions of the Femoral and Sciaticque nerves after 75 min.!
Hip Arthroscopy - Traction Table

- Known complications of Hip Arthroscopy on Traction Tables:
  - Essentially related to traction lesions up to 5% (!!(T>2h)): 530 cases
  - Nerve lesions: pudendal, femoral, sciatic, lat. fem cut.
  - Perineal necrosis
Hip Arthroscopy - Traction Table

• Known complications of Hip Arthroscopy on Traction Tables:
  – One study: traction injury >2h:
  – 2/19 cases = 10% !!!


• Nerve lesions: pudendal nerve (1 case=5%)
• Perineal hematoma (1 case=5%)
Hip Arthroscopy- Invasive Distraction

•!! Traction times > 1h30 - 2h !! :

• WE HAVE OVERCOME THESE COMPLICATIONS BY USING A DEDICATED INVASIVE HIP DISTRACTOR

– Useful in the:

– Challenging learning curve of hip arthroscopy!

– More and more complicated reconstructive surgery…
Hip Arthroscopy- Invasive Distraction

• **!! Traction times > 1h30 - 2h !! :**
  • WE HAVE OVERCOME THESE COMPLICATIONS BY USING A DEDICATED INVASIVE HIP DISTRACTER

  – Useful in the treatment:

  – Chondromatosis, Labral suturing, head and neck junction reshaping…

  – Ligamentum teres reconstruction, etc…
Hip Arthroscopy- Invasive Distraction

• Avantages of invasive distraction (www.dr-medical.ch) compared to traction table: 400 cases
  – Absence of lesions related to traction
    • Nerves
    • Cutaneous
  – Cost efficient (no traction table needed)
  – Modular and precise positioning of the hip in translation and various angulations
Hip Arthroscopy- Invasive Distraction

- **Avantages of invasive distraction**
  (www.dr-medical.ch) compared to traction table: 400 cases
  - Transportable! (if operating in several hospitals)
  - May be used in cases where the femur, knee, tibia or/and the ankle need to be protected (for example: total knee arthroplasty or fresh fractures)
  - Can be used in Lateral or Supine position
Hip Arthroscopy- Invasive Distraction

- **Avantages of invasive distraction** (www.dr-medical.ch) **compared to traction table : 400 cases**
  - Hip mobility can be easily and rapidly « freed » to test absence of hip impingement at the end of the procedure
  - If intra-operative difficulties are encountered -> Easily converted to open surgery without new draping and repositionning (ie « beach chair » in shoulder surgery)
Hip Arthroscopy- Invasive Distraction

- Lateral decubitus position + Invasive hip distraction (www.dr-medical.ch) :
Hip Arthroscopy - Invasive Distraction

- Lateral decubitus +
- Invasive distraction
- (www.dr-medical.ch)
Set up - Invasive distraction

→ Pins
Set up - Invasive distraction

→ Hip Distractor
Installation

→ Portal placement
Hip Arthroscopy- Invasive distraction

- Avantages of invasive distraction (www.dr-medical.ch) compared to traction table: 400 cases
  - Learning curve 100 cases for complex reconstruction...
  - 2 cases transient lateral cutaneous nerve paresthesia (<48h): 0.5% related to anterior portal placement
  - NO TIME PRESSURE TO BEGIN WITH...
  - GREAT TEACHING TOOL
Hip Arthroscopy- Invasive distraction
Hip Arthroscopy - Invasive distraction

- Avantages of invasive distraction (www.dr-medical.ch) compared to traction table: 400 cases
  - Traditional NON DISTRACTABLE HIPS (about 5% of the cases), ie non arthroscopable hips can be arthroscoped with invasive distraction!
  - ALL HIPS can be thus scoped (once adequate releases have been performed) because no traction time limit exists!
Test impingement free motion in max flexion and internal rotation

Hip can be freed to test impingement free motion in FAI...
Conclusions

• Arthroscopic surgery can be safe on a Traction Table if Traction Time is limited to 75-90 min and Traction Forces to 300-500N.

• If traction table is used, post should be >25cm in diameter and foot well padded

• If estimated Traction time is above 90min (learning curve!), then Invasive Distraction is Safe.