Subtalar Arthroscopy: Tighter Spaces

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Subtalar joint

a. Anatomy

i. Sural nerve lies lateral to the joint and superficial branch of the peroneal nerve branches lie dorsal
ii. The axis of the joint is over the tip of the fibula
iii. The posterior facet only can easily be reached by arthroscopy
iv. The posterior process of the talus and the os trigonum lie posterior
v. The FHL tendon lies on the medial side and runs through a fibro osseus tunnel just medial and anterior to the tibial nerve

b. Indications

i. Excision of an os trigonum
ii. Impingement of a lateral process fracture
iii. Chondral injury
iv. Fracture calcaneus
v. Fusion
vi. Sinus tarsi syndrome
vii. Excision of talo calcaneal tarsal coalition
viii. Removal of bullet fragments
ix. Impingement of calcaneus and fibula
x. Post fracture arthrofibrosis

xi. Talus fractures ORIF

c. Instrumentation
   i. 2.9 or 2.4 scope
   ii. Ankle instruments and shavers (3.5 mm) will largely suffice

d. Portals
   i. Anterior lateral
   ii. Direct lateral
   iii. Posterior lateral
   iv. Posterior – medial to the Achilles tendon (for the prone position)
   v. Medial – through the tarsal canal

e. Supine Technique
   i. Patient placed with the affected hip elevated and internally rotated
   ii. No traction required
   iii. Arthroscopy tower placed on the opposite side of the bed
   iv. Make the portals with care not to damage the superficial nerves
   v. An incision of the capsule may be required
   vi. The C arm or palpation will be required to identify the joint line
   vii. The instruments may be placed in bone if care is not taken
   viii. Initial visualization will likely require removal of soft tissue from the sinus tarsi or the posterior lateral side of the joint

f. Prone Technique
   i. Indication: Mainly posterior pathology – Os trigonum excision – FHL pathology or fusion
   ii. Patient placed prone on the table with a thigh tourniquet
   iii. Two portals established each side of the Achilles tendon
   iv. Initial dissection is blind and done on the lateral side to avoid the tibial nerve
   v. Joint visualized once a space has been created
g. Fusion technique

i. Fusion may require dissection of the joint capsule to allow insertion of the instruments.

ii. Use of an auger type burr beneficial

iii. Fixation is via screws from the tuberosity of the calcaneus to the talus (surgeon choice of type) – need 4 views to check position