

3:57 pm – 4:10 pm

Accessory Navicular

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Introduction:

- First described by Bauhin in 1605¹⁰
- Numerous other names in literature (Accessory Scaphoid, Prehallux, Os Naviculare)⁸
- Incidence 5-14%^{1,7,12}, only small percentage are symptomatic
- Up to 90% are bilateral²⁶
- Autosomal dominant inheritance pattern¹

History:

- Medial midfoot pain with activities, often exacerbated by shoe wear
- Minor trauma cited¹⁰
- Flexible flat foot deformity (debated)
 - Although Kidner¹⁰ felt that the altered pull of the PTT led to flattening of the arch, others, such as Kanatli et al⁹, have found no association b/t flexible flatfoot deformity and the presence of an AN
 - If the presence of an AN does not cause the flattening, it could be that the flatfoot increases the likelihood that an AN becomes symptomatic

Physical Examination:

- Tender medial prominence
- Pain with resisted inversion, which places tension on the synchondrosis
- Often flexible flat foot deformity is noted

Radiographic Evaluation:

- Plain Radiographs: best visualized and classified on the external oblique view
- MRI: not necessary for the diagnosis, but allows for evaluation of concomitant pathology
- Ultrasound: hyperechoic, heterogeneous appearance of the synchondrosis
- Bone Scan: sensitive, but lacks specificity; 50% of asymptomatic ANs may show increased uptake

Geist Classification⁷:

- Type I: small 2-3mm sesamoid within PTT; no bony attachment to navicular; rarely symptomatic
- Type II: large accessory ossicle with intervening synchondrosis; most likely to be symptomatic
- Type III: bony bridge; the “cornuate” navicular; rarely symptomatic

Non-surgical Management:

- Doughnut Padding, Orthotics, UCBL Orthosis, Cast Immobilization
- Poor results reported in the literature: successful less than 10% of the time⁸

Surgical Management:

- Excision: with (Kidner) or without PTT advancement
 - Good to Excellent results in 85-90% of patients^{1,20,21,27}
 - No significant difference in outcomes b/t Kidner and simple excision¹⁶
 - Multiple modifications of the Kidner: Bony Tunnel³, Suture Anchors⁵, Interference Screw²⁵
- Fusion / ORIF: 2 technique papers have been published^{13,17}; one case series⁴; one comparative study²²
 - No apparent diff in outcome; but nonunion and painful hardware have been noted in fusion pts.²²
- Drilling: Nakayama paper¹⁸
 - 97% Good to Excellent results; 58% achieved a bony union

-My preferred technique (excision and a suture anchor)

-Potential Sources of Failure²⁶

-Medial Pain – Painful scar, neuroma, tendinosis of or damage to PTT, incomplete bony resection, nonunion or prominent hardware (s/p fusion surgery), persistent pes planovalgus

-Lateral Pain – Subfibular impingement from incomplete correction of pes planus deformity

Adjunctive Procedures:

-Percutaneous TAL or Strayer

-Calcaneal Osteotomy (Medializing Osteotomy or Evans)

-Cotton Osteotomy

-Subtalar Arthroereisis

-Very little literature to guide selection. Really at the surgeon's discretion.

References:

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