

Middle Aged Person with an Extra Bone in Left Foot: A Case Report

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Abstract: The accessory navicular bone is often considered to be a normal anatomical & radiological variant. There are totally 3 distinct types of accessory navicular bones have been described. (1) Type 1 is a small, round separate bone which seen as imbedded within the tendon of tibialis posterior muscle. (2) Type 2 is a bit larger, triangular ossification centre present adjacent to the navicular tuberosity & connected by a synchondrosis. (3) Type 3 is an enlarged medial horn present on the navicular bone itself also called a cornuatenavicular. In the present case report we are describing in a middle aged male having accessory navicular in the left foot.

Keywords: Accessory navicular, Tarsal bones, sesamoid bone, tibialis posterior, flat foot syndrome.

INTRODUCTION

Navicular bone is a boat shaped often considered as the middle row bone of tarsals in the foot, which is having a tuberosity in its medial part [1-3]. The accessory navicular is considered to be a supernumerary bone in the human foot located usually seen posteromedial to the navicular tuberosity, also called as Ostiale externum/accessory scaphoid /naviculare secundarium [1, 4, 5]. It has been observed in that 10-14% of the population shows the presence of accessory navicular can be misinterpreted as a fracture in x-rays.

There are 3 types of Accessory navicular described based on the radiographic appearances.

A) Type I which is an oval shaped sesamoid bone (30%). It is usually seen in the distal portion of the tibialis posterior tendon. It has no cartilaginous connection to the tuberosity of the navicular bone.

B) Type II which is due to a secondary ossification centre in the navicular bone (50–60%). It is triangular/ heart shaped bone connected to the tuberosity through a cartilaginous synchondrosis or fibrous syndesmosis. This is the most symptomatic type.

C) Type III which is due to very prominent navicular tuberosity resulting from bony fusion of the accessory ossification centre with the tuberosity. It is also called cornuate/gorilli Formnavicular.

The accessory navicular dragged considerable attention among clinicians due to its possible role in flat-foot called pesplanus [4, 5], in which the arch of the

foot collapses, as well as its potentiality to cause pain at its interface with the navicular tuberosity.

CASE PRESENTATION

50 year male presented to the outpatient department with complaint of flat foot in both feet & intense pain in the left foot, clinical examination of foot revealed swelling in the medial side of left foot, X-ray revealed a small round ossified tissue near the tuberosity of navicular bone, on the right side it is normal.



Fig-1: Left foot of the individual from the medial side showing the flat foot



Fig-2: Sole of the left foot of the individual showing flat foot



Fig-3: Left foot of the individual showing swelling on the medial side of the foot



Fig-4: Right foot of the individual from the medial side showing the flat foot



Fig:-5 X-ray of Left foot of the individual was showing sesamoid bone on the medial side of the foot poster medial to the navicular tuberosity

DISCUSSION

The accessory navicular bone was first described by Bauhin in 1605 as an accessory ossicle located at the medial edge of the navicular [6, 7]. Derived from extra ossification centres. Most cases are asymptomatic, but ANB can cause pain and tenderness in a small proportion (<1%). Symptoms usually begin after wearing ill-fitting shoes, with weight-bearing activities in athletics, after trauma to the foot. The ANB is usually associated with a flatfoot deformity (as seen in the current case) [6, 7]. The tibialis posterior has a major role in supporting the medial arch of the foot. This support can be compromised by abnormal insertion of the tendon into the accessory navicular bone if present. This leads to loss of suspension of PTT and may cause perineal spastic pesplanus or simple pes planus [6, 7].

TREATMENT

In the current case we gave Conservative therapy of shoe-wear modification (use of a softer, wider shoe and medial arch support for flatfoot). Other possible treatment options are below-knee cast may be worn for 3-6 weeks for persistent symptoms. Treatment by non-steroid anti-inflammatory drugs and corticosteroid injection can be useful for acute pain.

For refractory cases, surgical management can be considered. It consists of the resection of the part projecting from the navicular bone with reintegration of the tendon of the tibialis posterior muscle in a more plantar position. In addition, pesplano-valgus deformities need to be addressed concomitantly.

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