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TUBERCULOSIS OF NAVICULAR BONE IN A CHILD – A RARE PRESENTATION

Orthopaedics

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ABSTRACT

Tuberculosis has been known to affect mankind since the dawn of human civilization and still remains a major problem in the developing countries. Extra pulmonary TB accounts for up to one-third of all cases and can be encountered in various organ systems like lymph nodes , genitourinary tract, skeletal system. Children shows a higher predisposition to the development of extrapulmonary tuberculosis. Osteoarticular involvement occurs in 1 to 3% of patients with extra pulmonary tuberculosis and spine represents fifty percent of these lesions. According to sites of predilection involvement of foot comes after spine, hip and knee. In foot the lesion involves calcaneum, talus, first metatarsal and navicular bones in decreasing order. prompt diagnosis and treatment of this curable disease remain critical for initiation of proper management prevention of joint deformity and permanent bone destruction.

KEYWORDS

Tuberculosis, Navicular bone, Rare, Child.

INTRODUCTION:

Skeletal tuberculosis is a very rare disease comprising 1-3% of the total population of tubercular patients[1]. Foot tuberculosis is manifested in only 8-10 % of the patients with osteoarticular tuberculosis (approximately 0.1-0.3% of all patients with extra-pulmonary tuberculosis)[2-4]. Infection in the midfoot spreads rapidly to many joints because of their intercommunicating synovial spaces[5]. Pulmonary involvement is uncommon[6,7,8].Tuberculosis of a navicular bone is a rare entity. Osteoarticular tuberculosis of foot is uncommon and that of navicular bone in paediatric age group is extremely rare. The ESR is almost always elevated in patients with tuberculosis[9,10,11]. The diagnosis of navicular bone tuberculosis is often delayed due to uncommon site, and ability to mimic other disorders clinically and radiographically. The early diagnosis and prompt treatment is of utmost importance for good clinical outcome.

CASE PRESENTATION:

A 4 year old girl child presented to orthopaedic OPD, with a chief complaint of dull aching pain in the right midfoot and swelling in the right midfoot since 2 month, and unable to bare weight and do day to day activities like playing as told by her mother. swelling is gradually increasing in size and progressing in nature and attained 4*4 cms size over 2 months, no history of trauma, fever or weight loss and no history of pulmonary tuberculosis in the family. Milestones of the child are periodically attained and underwent complete immunization according to WHO schedule. Patient is conscious coherent with right inguinal lymphadenopathy. An ill-defined margins of swelling over the antero-lateral aspect of dorsum of right mid foot which is soft in consistency, non-fluctuant [Fig 1]. Local rise of temperature and tenderness over the anterolateral aspect present. subtalar joint movements are restricted. Radiograph of Right foot AP and lateral view shows lytic lesion in the navicular bone[Fig 2], chest radiograph is normal[Fig 3]. Blood investigations showed raised ESR and lymphocytosis. An open biopsy was done through an incision over the anterolateral aspect of the mid foot[Fig 4], necrotic caseous material scooped out from the lateral aspect of navicular bone and sent for histopathological examination which showed chronic granulomatous inflammatory lesion probably of kochs etiology[Fig 5]. ZN staining was negative for acid fast bacilli, gram staining showed no bacterial growth and culture and sensitivity showed no bacterial growth. Anti-tubercular treatment was initiated with four drugs(HRZE) for 12 months according to WHO TB foot guidelines. Follow up radiographs at 2 months [Fig 6] and 4 months [Fig 7] have been taken which showed bone regeneration.

Fig 1.

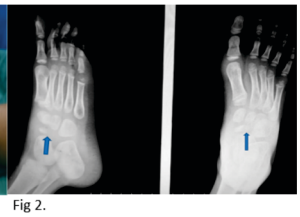

Fig 2.

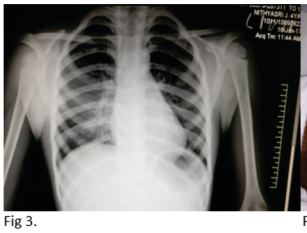

Fig 3.

Fig 4.

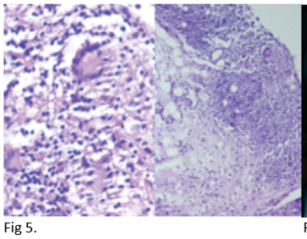

Fig 5.

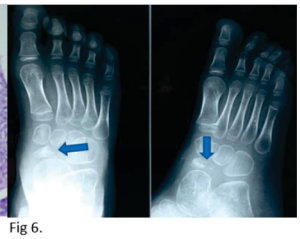

Fig 6.

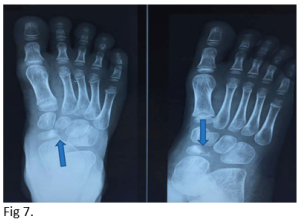

Fig 7.

CONCLUSION:

TB navicular bone is a very rare presentation leading to misdiagnosis. Lytic lesion with long standing history should never be ignored. We concluded that TB navicular bone is a very rare condition that to in paediatric age group and can be treated conservatively unless

associated with any complications. Debridement or resection along with AKT has excellent results in paediatric age groups.

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