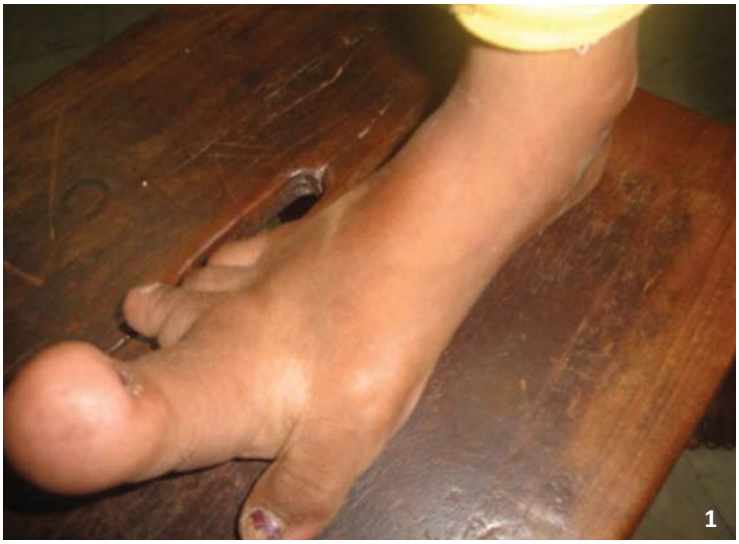
Macrodactyly

Das D[1], Shukla S[2]

Introduction

An eleven years old female, presented with gradual enlargement of second toe of right foot shortly after birth without involvement of any other digit. There was no maternal history of radiation exposure, drug abuse, tobacco and alcohol intake. On examination, digit was enlarged, non tender, firm in consistency with thickened, pale, greasy skin and hypertrophy of nail (Fig 1,2). X-ray of the right leg showed features of macrodactyly of the second digit (Fig 3). Ultrasonography of the digit revealed diffuse soft tissue thickening with evidence of increased blood flow. The venous flow was normal on both the legs and there was no evidence of arterio-venous malformation in the feet. Chromosomal study was normal. CT scan of the head confirmed no abnormality in the pituitary fossa and adjoining areas.



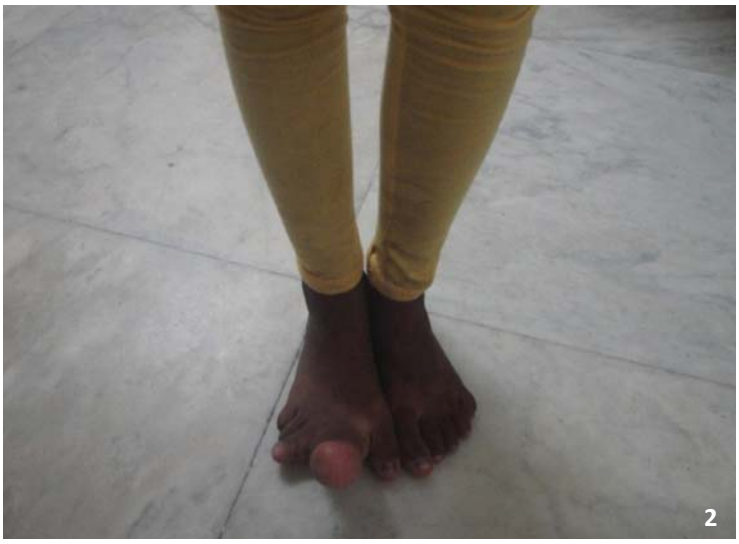


Fig 1 and 2: Showing enlargement of second digit of right foot only

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Discussion

Enlargement of a digit may be due to haemangioma, lymphangioma, lipoma, or tumor mass and in these situations, only a defined element (vessels, subcutaneous fat, bone etc) is affected. Congenital macrodactyly strictly speaking, refers to the rare malformation characterised by enlargement of all structures (subcutaneous fat, nerve, vessel, skin, nail etc) of a digit or its phalanges. Hands and feet may be affected equally in macrodactyly. Most reported cases indicate a slight male preponderance[1]. Most commonly involved digits are second

digit, followed by third. Involvement of more than one digit is common. It may be of progressive or static type. In static macrodactyly the deformity is present in infancy and is usually have diffuse enlargement of the digit, however the distal and palmar tissue appear more enlarged than the dorsal and proximal tissues. The fingers grow in proportion to normal digital growth. In progressive macrodactyly, the digits may not enlarge during infancy but begin to enlarge rapidly during early childhood, frequently with an annular deformity that makes the finger banana shaped. Pedal macrodactyly tends to be of the progressive type[2]. The clinical course of overgrowth in macrodactyly is important for prognostic and therapeutic reasons. There are congenital pathologic conditions in which localized overgrowth may mimic the clinical picture of macrodactyly include neurofibromatosis, primary lymphatic disorder (Milroy disease) and vascular malformation, for example Klipple-Trenaunay-Weber syndrome and hereditary hamartomatous syndromes like Proteus syndrome, Maffuci Syndrome and Ollier disease[3]. Biopsies can provide information on the tissue elements that take part in the formation of the hamartoma. Treatment for macrodactyly is on a case by case basis and the major aim is the reconstruction of a pain-free functioning foot[4]. The growth of affected digit in children may be retarded by destroying, stapling, or wiring the epiphyseal plate [5]

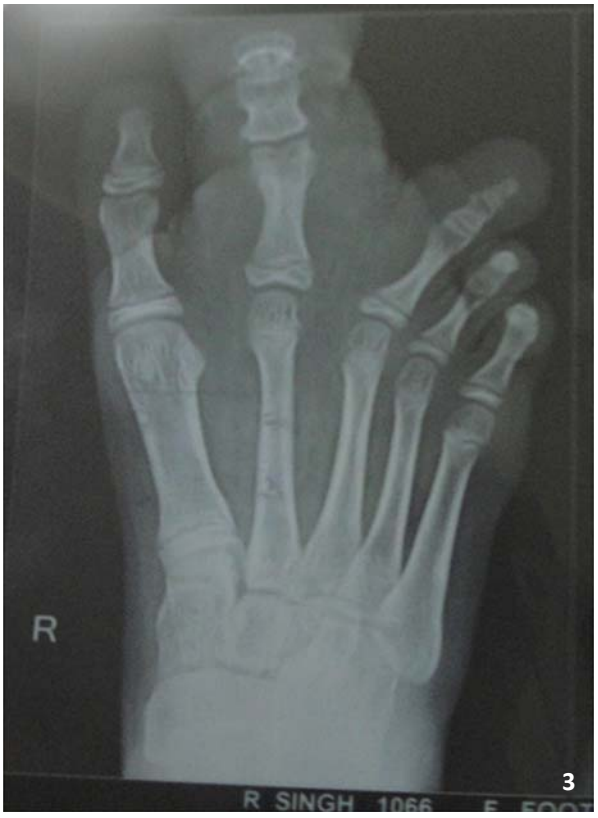

Fig 3: X ray of right foot showing marked hypertrophy of proximal, mid and distal phalanx of second toe. Bones showing normal mineralization. Soft tissue hypertrophy noted around the hypertrophied bone. Other toes appear normal. Tarsal and metatarsal bones were normal.

References

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