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Macrodystrophia lipomatosa: multidetector CT and MRI findings

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Clinical—A 13-month-old male patient presented with disproportionate overgrowth of the left foot big toe (Figure 1). There was no family history and other anomalies were not detected.

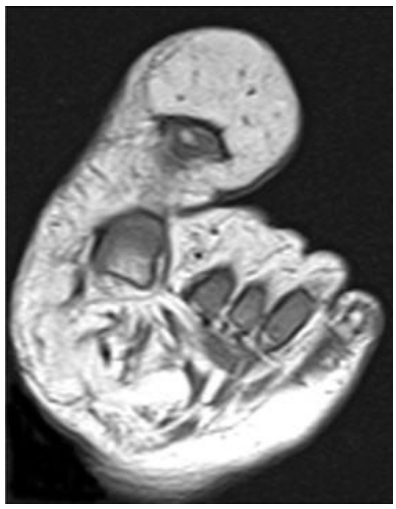
Plain radiography of the left foot revealed an enlarged distal phalanx of the big toe, together with thick soft tissue. To obtain a detailed view of the bone or soft tissue pathologies, computed tomography (CT) was performed using a 16-detector-row CT scanner (multidetector CT, Aquillon; Toshiba Medical Systems, Tokyo, Japan).

CT scan revealed macrodactyly with hypertrophy of the subcutaneous fat tissue and enlargement of the bone in the big toe (Figure 2). Magnetic resonance imaging (MRI; 1,5 Tesla, Siemens, Germany) imaging showed in detail prominent proliferation of fatty tissue of the big toe (Figure 3).

Figure 1. Clinical image shows overgrowth of the left foot big toe

Figure 2. 3-D volume rendering image shows enlargement of the bone in the big toe. It shows dorsiflexion of big toe due to hypertrophy of the fat tissue

Figure 3. T1-weighted axial image shows prominent proliferation of fatty tissue of the big toe



Discussion—Macrodystrophia lipomatosa, termed congenital macrodactyly, is a rare congenital malformation characterised by progressive enlargement of all mesenchymal elements of the digit, except the metacarpal and metatarsal.[1] It is more common on the hand than the foot.

Soft tissue hypertrophy is most marked in the distribution of the plantar or median nerves.[2] The differential diagnosis of macrodactyly includes acquired causes such as

dactylitis secondary to infection, infarction and osteoid osteoma, Still's disease, melorheostosis, and congenital causes including haemangioma, lymphangioma, plexiform neurofibroma.[3,4] In addition, fibrolipomatous hamartoma and fibrolipoma should be considered in different diagnosis.[4]

Multiplanar reconstruction and three-dimensional (3-D) volume rendering imaging features of multidetector CT and MR images give important information in different diagnosis of pathologies causing macrodactyly.

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