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MIRROR FOOT AND FIBULAR DIMELIA WITHOUT ASSOCIATION ANOMALIES: CASE REPORT

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Abstract

Introduction: Tibial aplasia accompanied with fibular dimelia and mirror foot is very rare abnormality which can be seen in literature nowadays.

Case presentation: A 5month-old baby boy referred to pediatric clinic with duplication of toes without any further phenotypic anomalies; he underwent many investigations for accompanied anomalies and was operated then.

Discussion: The cause of anomaly has been unknown so far and management of related problems is very challenging.

Keywords: Mirror foot, fibular dimelia, case report.

Introduction: Mirror polyductly is a rare type of hand or foot polyductly characterized by mirror-image duplication around a midline axis on the arm or leg, with the absence of a recognizable thumb or hallux [1]. Although extremely rare, mirror polyductly of the foot may be associated with tibial agenesis and fibular dimelia [2]. Mirror foot may occur as an isolated deformity [3, 4] or as part of a syndrome of multiple congenital abnormalities such as fibula dimelia [5-8], tibia hypoplasia [9-11], and nasal abnormalities including Laurin–Sandrow syndrome [12-15] and Martin syndrome [16].

Case Presentation:

A 5month baby was brought to the pediatric clinic with chief complaint of lower exterimity anomaly. The infant was the second baby and delivered by cesarean section. The prenatal and the perinatal history were insignificant. His Rt foot was duplicated symmetrically without clear distinguishable great toe (Figure 1).

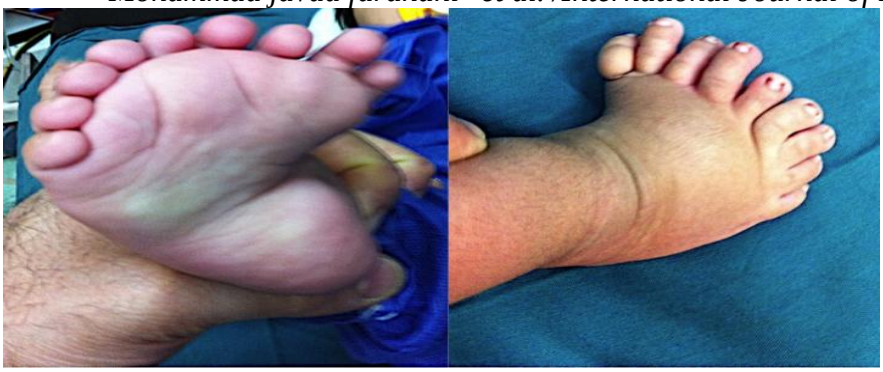

Figure 1: Duplication of Rt foot with indistinguishable big toe.

The patient underwent further investigations, only revealing dimelia of the fibula and aplasia of the tibia (Figure 2).

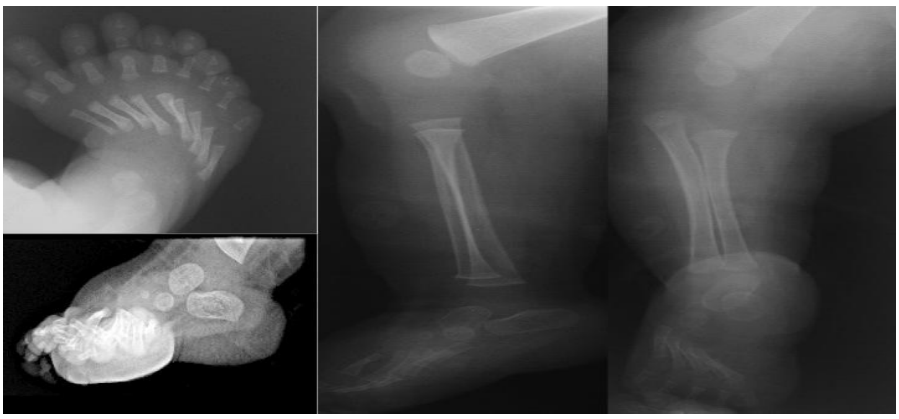

Figure 2: Radiographic views of fibular dimelia and duplication of foot.

Serial long leg casting was applied for flexion contracture of the knee and eqinus deformity of the ankle since referral till operation time; both of them resolved to some extent. The patient underwent operation (excision of the medial extra 4 rays of Rt foot (Figure 3).

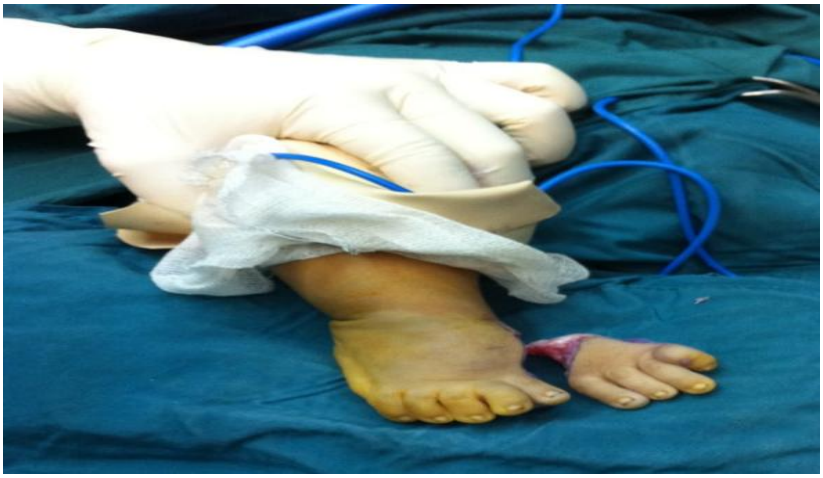

Figure 3: Excision of extra 4rays of medial.

The reversed last shoes were prescribed after surgery; after that the parents were recommended to massage the forefoot to valgus and ankle to dorsiflexion. The follow up photos revealed acceptable results (Figure 4).

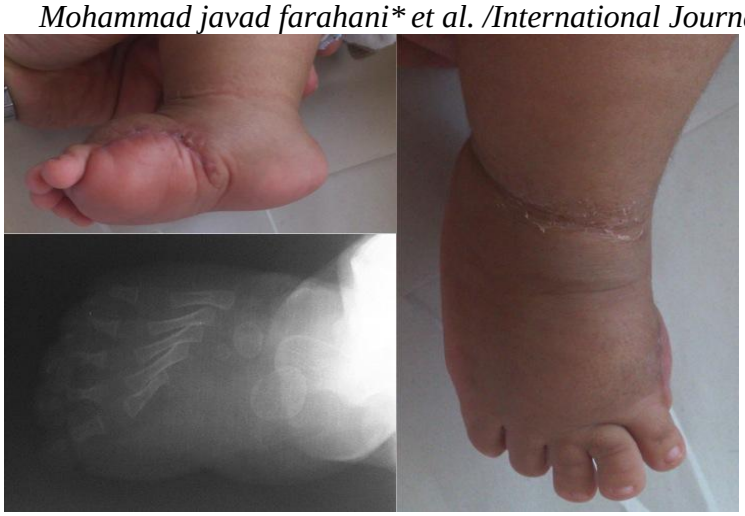

Figure 4: Photography after 3 months post operation.

Discussion and Conclusion

Mirror image duplication of the foot (mirror foot) is a very rare congenital anomaly. To the best of our knowledge, 28 cases have been reported in the English literature [3–21], among which only seven cases have been documented for their treatment [6.12,13,15,17].

About classification, Hodaka Fukazawa et al.(2009) suggested a classification derived from Al-Qattan mirror hand's classification; the presented report will be classified as type IA.

About treatment, literature lacks enough evidence-based medicine documents to propose single global protocol to manage these patients and all of the presented documents are case reports. Problem oriented managements nowadays are serial casting for deformity, rays excision before walking, centralization of the fibula and ankle joint fusion for reconstruction of the knee and ankle joint. In later stages, we can do bone lengthening of the fibula and femur (22). I believe we must select patients very carefully for surgery. The problem oriented individualization is the most important measures to manage these cases.

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