

Tibial Hemimelia Type VIIa: A Case Report

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Abstract : Introduction: Incidence of tibial hemimelia is 1:1,000,000. Due to pre-existing case studies and literature, there is now a better understanding of the genetics, etiology and pathoanatomy of tibial hemimelia, but an underlying cause is generally unknown. This presentation aims to discuss a rare, congenital lower limb deficiency observed in a patient in order to identify potential prenatal risk factors and future considerations for the patient's well-being. Observation: A newborn female child, born full term via spontaneous vaginal delivery after induction of labor to unaffected and non-consanguineous parents. The prenatal course was notable for limited and disjointed prenatal care as well as maternal tobacco and marijuana use, anemia of pregnancy, and inadequate weight gain. Prenatal imaging showed lower extremity deformity with the inability to visualize tibia and bilateral clubfeet in the setting of Intrauterine Growth Restriction (IUGR). The patient presented with right equino varus deformity of the foot and right knee joint deformity. Radiological imaging showed the absence of the right tibia and varus angulation of the right foot with dislocation of the tibiotalar joint. Normal femur with lateral and mild anterior displacement of a wide fibula (Weber Type VIIa). Due to the absence of the patient's tibia and knee extensor mechanism, the patient was not a candidate for reconstructive surgery and ultimately underwent successful right knee disarticulation. Discussion and Conclusion: By utilizing a retrospective chart review of this case, possible risk factors in prenatal care may be identified and add to existing knowledge on etiology. Hopefully, a cause can be clearly identified in the future and, thus, addressed in the prenatal period. In addition, we can investigate the patient's well-being and adjustment post-operatively to support outpatient management of an uncommon anomaly.

Keywords : Tibial hemimelia, prenatal care, pediatric orthopedics, congenital deformity

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