Amniotic band sequence

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Clinical image description

A 33 weeks preterm female weighting 1945 g was born to a 28-year-old gravida 2 para 1. Pregnancy was surveilled in Ango-la with two ultrasounds performed at 12 and 23 weeks reported as normal. Emergent cesarean section was performed due to severe fetal bradycardia in context of a maternal sepsis. She was born depressed and was immediately intubated, with good response (AS 2/5/7) being off mechanical ventilation 1 hour later. Her clinical examination revealed multiple distal deformities in all the four limbs (Figures 1-3), being possible to observe syn-dactyly and amputation phenomena. Small constricting strings were visible, attached to the distal extremities. At day 1 she was observed by a pediatric surgeon that excised the constricting bands in some of the fingers. She was discharged from the hospital at day 24 and at her 3 months’ appointment she had a normal development and maintained her surveillance by a multidisciplinary team that includes an orthopedic surgeon.

Amniotic band sequence is a rare entity that comprises a broad spectrum of congenital defects. Depending on location and depth of the bands and timing of its appearance, different segments might be affected. Limbs are predominantly involved but craniofacial, abdominal and spinal defects can also occur [1].

There is no consensus on the etiology. The most widespread theory implies, as primary mechanism, rupture of the amnion in early pregnancy resulting in multiple loose strands (amniotic bands) that adhere to or entangle the fetus, compromising until then normally developed structures, leading in severe cases, to vascular disruption and subsequent autoamputation [1].

Mother’s consumptions also appear to be an important risk factor [2].

Diagnosis, that may be suspected in the first trimester and it is possible through detailed and serial ultrasound examination [3], is crucial so that timely in utero lysis of constriction rings can be offered, in order to restore normal perfusion and prevent amputation [4].

Keywords: amniotic band; amputation; prenatal diagnosis; congenital defect.

Abbreviations: AS: Apgar Score.
Figure 1: Newborn with limb defects. Arrow indicates the right hand with partial amputation of some fingers

Figure 2: Left hand and right foot, arrows indicate constriction strings.

Declarations

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