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CASE REPORTS

A TRUE NEONATAL TAIL WITH LIMB DEFECT - A RARE CASE REPORT

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ABSTRACT
A true neonatal tail, which is present in caudal region with no connection to spinal space containing only muscle, connective tissue and covered with skin, is very rare presentation. Till now less than 40 cases have been reported in literature worldwide. Limb deformity may be associated with neonatal tail. A male neonate born to primigravida mother with birth weight 2855 gm had a neonatal tail associated with varus deformity of right ankle and syndactyly of right 3rd, 4th, 5th toes.

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Neonatal tail, Spinal dysraphism, Spina bifida

Introduction

A human baby having caudal appendage resembling a tail generates an unusual amount of interest, excitement and anxiety.[1] Human tail is an extremely rare condition, it is mentioned in human, only in mythological books. Till now only 59 cases have been reported in literature, 49% were associated with spinal dysraphism and 20% with tethered spinal cord,[2] but true human tail i.e. not associated with spinal dysraphism or any other spinal cord defect is reported in less than 40 cases.[3] We present a male neonate with neonatal tail associated with varus deformity of right ankle and syndactyly of right 3rd, 4th and 5th toes.

Case Report

A full-term male neonate born to primigravida with birth weight 2855 gm, with the normal perinatal transition was detected to have a tail like projection from the lumbosacral region measuring approximately 7 cm (Figure 1). On palpation, It was soft freely moveable in all directions with no bony or any hard content in it. Along with tail, the baby had syndactyly of 3rd, 4th and 5th toe and varus deformity of the right foot (Figure 2). Other general examinations and systemic examinations were normal. There was no history of any familial birth defects. X-ray of the lumbosacral region. showed normal bony structure and normal underlying soft tissue. As MRI scan was not available in our institution, so ultrasonography of the tail was done which showed no connection with the spinal cord. The neonate was referred to the surgery department for corrective simple resection and closure of tail

Discussion

The human tail is an example of vestigial organ and is supposed to represent useless remnant of what were once functional and useful organ in our primitive ancestors. During the 4th - 6th week of embryonic

Figure 1. Neonatal tai

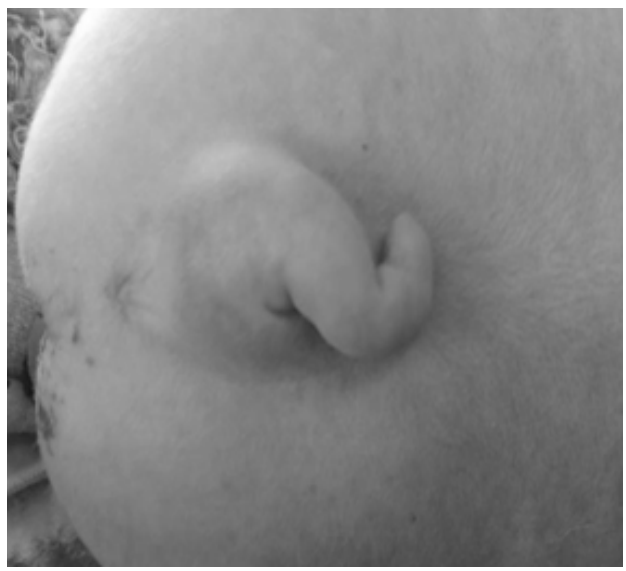

Figure 2. Syndactyly of 3rd, 4th and 5th toe and varus deformity of the right foot

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development, the embryo possesses a tail containing 10 - 12 caudal vertebrae.[3] It has short distal portion which contains mesodermal elements and lacks bone.[4] The tail has maximum length at the end of 5th week of development when it measures approximately one sixth the length of the entire embryo. At 8th week, distal coccygeal segments of the vertebrae are phagocytosed by white blood cells. In general, at the end of 8th week, the tail is fully diminished.[4] Some people argue that the presence of a tail in a newborn represents reversion to lower species, but it is now widely accepted that a human tail is a result of defect during development that causes a portion of the embryonic tail to persist. Lu at al[2] in their study of neonatal tail from 1960 - 1997, reported 59 cases of which 49.2% had spinal dysraphism, 27.15% had lipoma and club foot in 1 case. No case has been reported with syndactyly. Scientists have studied in mice and other vertebrates and found that gene regulating the formation of tail is Wnt-3a and Cdx1.[5] It is now well known fact that down regulation of Wnt-3a gene induces apoptosis of tail cell in mouse. Mutation in Wnt-3a gene in humans as a cause of persistence of tail needs further evaluation. Treatment of tail remnant in true neonatal tail with no underlying connection is, simple excision and closure.

Compliance with Ethical Standards

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Conflict of Interest: None

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