

Human-Tail with Closed Spinal Dysraphism: Management of a Rare and Interesting Clinical Finding

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Abstract

Human-tail is a fascinating clinical finding. It is a vestigial organ and its presence in humans is considered abnormal. Depending upon the cultural beliefs, in some parts of world it is considered as boon and in some as a bane. Here I am discussing a case of 3-year-old female child with tail and occult spinal dysraphism. Earlier few case reports have been published on this topic; I am reporting this to add one more in the currently available literature.

Keywords: Human tail; Vestigial; Spinal dysraphism

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Introduction

In the process of evolution, many human organs have lost their original function and now considered as vestigial organs. There is a long list of these vestigial organs and some of them are human tailbone (coccyx), wisdom teeth, vermiform appendix, body hair, semilunar fold (eye), platysma and muscles of the ear. Some vestigial behaviors and reflexes are also found in humans, example goose bumps formation under stress, palmar grasp reflex in infants. Aristotle said, "Man is by nature a social animal" but man with a tail becomes a topic of mockery in the society [1-3].

All mammals have a tail at some point of time in their development, in humans it is present for a period of 4 weeks during embryonic development and it is most prominent in 31-35 days old embryo. By 8 weeks, human-tail disappears [4,5]. Coccyx has lost its original function in assisting mobility and balance and it also serves as an insertion site for many ligaments and muscles. In rare cases, a short tail-like structure may present at birth. It occurs twice as often in males as in females. Human-tail may be associated with other abnormalities (spinal cord anomalies) [6-9]. Having a tail in humans is considered as a matter of disgrace and ignominy. It may also cause difficulty in sitting and wearing pants, if significantly long in size.

Case Report

A 3 year-old female with congenital tail was brought to plastic surgery OPD for seeking advice regarding scarless removal of the tail. She was forth born child in her family. Folic acid and

antenatal visits were not taken by her mother. There was no other complaint and her family history was insignificant. All milestones were attained at an appropriate time as per her age and sex. Her parents want to get rid of her tail due to cosmetic reasons only. On examination there was a 15 cm-long curved tail in the midline at lumbosacral area. The tail was covered by normal skin and surrounding skin was also normal (no discolouration, sinus, discharge or hair patches were found). Tail was soft in consistency and she was not able to move the tail. Systemic examination was within normal limits. There was no motor and sensory deficit. Anal tone was normal. Magnetic resonance imaging revealed closed (occult) spinal dysraphism in sacral region with lipomyelomeningocele with low lying (upto S1 level) tethered cord. Parents were counseled regarding the management and post-operative outcome. They just wanted to get rid of the tail and were not ready to accept any neurological deficit in post-operative period (**Figures 1 and 2**).

Surgical Management

Surgical excision was planned in collaboration with neurosurgeon under general anesthesia. Patient was placed in prone position and an elliptical incision was placed at the periphery of the skin appendage (tail). There was a small fibro-fatty connection between the tail and the underlying neural tissue. Tail was excised and partial resection of lipoma was done to avoid injury to the



Figure 1 Photograph showing a long curved tail in midline.



Figure 2 T2 Sagittal section of MRI showing low-lying tethered cord with lipomyelomeningocele.

neural tissue. Cord detethering was not attempted as patient was asymptomatic and her parents were not ready to take any risk.

Wound was closed in layers and sterile dressing was done. Post-operative recovery was good and sutures were removed on post-operative day 10. Patient was discharged after suture removal with an advice to come for follow up regularly.

On histopathological examination, the periphery contained dermal appendages, hair follicles and sweat glands and in the centre there were lobules of mature adipose tissue which were separated by fibrous septae. No bony or cartilaginous elements were identified in the specimen.

Discussion

It is a well-known fact that human-tails could be a symbolic representation of an underlying neurological pathology. A rigorous history, neurological examination and imaging study (MRI) of the vertebral column should be done in every case of caudal appendage (human-tail) to exclude the possibility of underlying spinal deformities [6-11]. As in this case it was associated with closed spinal dysraphism in sacral region with lipomyelomeningocele with low lying tethered cord. Lipomyelomeningocele results from the fusion of the spinal cord with fatty elements due to premature disjunction of the epithelial ectoderm from the neural ectoderm. Complex neurological surgeries might have to be performed so one should be prepared for the same. Proper counselling should be done regarding post-operative outcomes. As in this case, this was a female child and her parents' main concern was having no residual deformity after surgery. In developing countries especially in India, marriage of a girl without dowry is a Herculean task and marriage of a female with disability/deformity is even much more difficult. Considering all this as she was asymptomatic, only excision of the tail was done [9-11].

In cases where the skin defect is large, locoregional flaps (Limberg flap, transposition flap, Latissimus dorsi muscle flap, perforator flap) can be considered for wound coverage. Good aesthetic outcome can be achieved with a pertinent surgical planning and execution.

Conclusion

Human-tail could be a symbolic representation of the underlying spinal cord anomaly so this clinical entity should be examined and investigated carefully as patient might not have any complaint except the cosmetic deformity. Complete diagnosis should be made and prognosis should be discussed with the patient/attendants.

References

- 1 Bartels M (1884) Die geschwanzten menschen. Arch Anthropol 15: 45-132.
- 2 Ledley FD (1982) Evolution and the human tail: A case report. N Engl J Med 306: 1212-1215.
- 3 Kansal R, Agrawal N, Khare S, Khare A, Jain S, et al. (2010) Newborn with a tail - A genetic throwback. Peoples J Sci Res 3: 15-17.
- 4 Williams PL, Wendell-Smith CP, Treadgold S (1966) Basic Human Embryology. London: Pitman Medical Publishing Company, UK.
- 5 Zimmer EZ, Bronshtein M (1996) Early sonographic findings suggestive of human fetal tail. Prenat Diagn 16: 360-362.

- 6 Singh DK, Kumar B, Sinha VD, Bagaria HR (2008) The human tail: A rare lesion with a occult spinal dysraphism- A case report. *J Pediatr Surg* 43: e41–e43.
- 7 Dao AH, Netsky MG (1984) Human tails and pseudo tails. *Hum Pathol* 15: 449-453.
- 8 Chakraborty S, Oi S, Yoshida Y, Yamada H, Yamaguchi M, et al. (1993) Myelomeningocele and thick filum terminale with tethered cord appearing as a human tail. *J Neurosurg* 78: 966–969.
- 9 Belzberg AJ, Myles ST, Trevner CL (1991) The human tail and spinal dysraphism. *J Pediatr Surg* 26: 1243-1245.
- 10 Kabra NS, Srinivasan G, Udani RH (1999) True tail in a neonate. *Indian Pediatr* 36: 712–713.
- 11 Lu FL, Wang PJ, Teng RJ, Yau KI (1998) The human tail. *Pediatr Neurol* 19: 230-233.