A case of anorectal malformation with human tail

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A human tail is defined as a rare congenital benign cutaneous appendix attached to the lumbosacral region, reported since the late nineteenth century. This case study presents an exceptionally rare anomaly of a perianal human tail with imperforate anus, a condition documented in only four cases in the literature. [1] The letter delves into the association of a human tail with anorectal malformation.

The subject, a one-day-old male born through normal vaginal delivery with unremarkable prenatal history and fetal ultrasound, exhibited no anal opening but had a tail-like structure near the anal verge. Physical examination revealed abdominal distension and the absence of an anal opening. Palpation revealed a 3 cm long boneless soft tissue appendage covered by skin, with no observed movement- the tail. The neonate had a normal penis and both testicles, with meconium passage in urine (Fig. 1). Additional examinations disclosed associated anomalies, including an atrial septal defect on an echocardiogram and an absent right kidney on abdominal ultrasound. Neurological assessment showed normal findings without associated defects.

A diagnosis of a human tail accompanied by an imperforate anus was established and colostomy was performed. This was followed by posterior sagittal anorectoplasty at six months of age. The procedure involved a sagittal incision, dissection of anal sphincter muscles, and the dissection and ligation of a rectourethral fistula. The tail was excised through an elliptical incision around it, followed by complete dissection from subcutaneous tissue and parasagittal muscle fibers, with no connection to the spinal cord. Histopathological examination was conducted on the transected tail.

Table 1: Reported cases of anorectal malformation with tails.

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Case report finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kahler et al[5]</td>
<td>1998</td>
<td>Pseudo Tail variant in association with Currarino's triad including anal atresia with recto-vaginal fistula</td>
</tr>
<tr>
<td>Raines et al[6]</td>
<td>2010</td>
<td>Imperforate anus with a rectovestibular fistula and pseudotail</td>
</tr>
<tr>
<td>Our case</td>
<td>2023</td>
<td>Human tail accompanied by male imperforate anus with rectourethral fistula</td>
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</tbody>
</table>

Human tails are rare benign congenital abnormalities, with a male-to-female ratio of 2:1. [1] The co-occurrence of a human tail with an imperforate anus is extremely uncommon, and the pathophysiology of their development differs slightly. Consequently, the relationship between imperforate anus and a human tail remains unknown. [2] Both conditions are congenital defects often associated with other congenital abnormalities. [2] Newborns with human tails require investigation for possible neurological involvement [3], with spinal dysraphism (49%), lipoma (27%), and tethered spinal cord (20%) being common associated anomalies. Other related abnormalities include congenital heart disease, cleft

Figure 1: Image showing imperforate anus and a small tail.
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palate, clubfoot, syndactyly, hemangioma, and omphalocele. [2]

Notably, there have been 40 reported cases of human tails without imperforate anus. [3] Reviewing the literature, only four cases of human tails with imperforate anus have been documented as depicted in Table 1.

In 1984, Dao and Netsky categorized human tails as either ‘true’ or ‘pseudo’ based on clinical examination and histopathological findings. [7] The excised true tail revealed skin-covered tissue without bone or cartilage, consisting of squamous epithelium, muscles, adipose tissue, blood vessels, and nerve fibers. True human tails have an embryonic origin. In contrast, pseudo tails, though superficially similar to true tails, often contain bone and cartilage remnants.

REFERENCES