We report a case sacrococcygeal tailgut cyst in a newborn. Although this condition is extremely rare it should be one of the differential diagnosis of sacrococcygeal swellings.


Tailgust cyst (retro-rectal cystic hamartoma) is a rare congenital lesion, which is present in the pre-sacrococcygeal space. It is made up of multi-loculated cyst lined by gastrointestinal epithelium, often mucus producing cells and squamous, transitional and columnar epithelium. Most of the lesions are reported in adult women; half are discovered incidentally\(^1,2\). The definitive treatment is surgical excision.

THE CASE

A newborn girl was found to have a cystic right gluteal mass on routine examination. She is a product of full term with a birth weight of 4.3 Kg. No other abnormality detected on systemic examination. Rectal examination was negative except for some vague fullness. Plain spine x-ray did not show any abnormality while spinal and pelvic ultrasound showed large (10 x 8 x 5 cm) multilocular cyst anterior to sacrum and posterior to rectum, with no solid or calcified components. Laboratory tests for complete blood count, urea, creatinine, electrolytes, liver function tests, alpha fetoprotein and Beta HCG were normal. At operation a huge cystic lesion was found occupying the retro-rectal space and adherent to coccyx. Complete excision along with the coccyx was performed (Fig.1). Postoperative course was uneventful. Gross histopathological examination showed a cyst measuring 8 x 5 x 1 cms multi-loculated in nature, it was filled with serous fluid and had smooth lining. Microscopically, the cysts were lines by ciliated pseudo-stratified low columnar to cuboidal epithelium. Bundles of smooth muscle were found adjacent to the cyst, which was not organized in a circular and longitudinal fashion and it also lacked a myenteric plexus. There was no evidence of malignancy or immature elements (Fig. 2,3)
**DISCUSSION**

The retro-rectal space is bounded by rectum anteriorly, the sacrum posteriorly, the peritoneal reflection superiorly and the levators ani and coccygeus muscles inferiorly. The ureters and iliac vessels are the lateral margins.

The embryology of the retro-rectal space is complex and all three grm layers play part in the development of the structures of this end of the embryo. The cloacal membrane becomes ventral and bounds a distal recess of the hind gut known as the tail gut (post anal gut) during the fourth week of the primitive gut development. This tail is maximally developed around the 8-mm stage (35 days gestational age) and usually completely regresses by the 35-mm stage (56 days gestational age). The anus is formed cephalad to the tail. Because the primitive gut extends into the tail beyond the
point at which anus develops, it is called the tail gut or post anal gut. Remnants of the
tail gut gives rise to congenital cysts3,4.

The largest series was presented in a paper by Hjermastad and Helwig3 which shows
that the condition is extremely rare and most description are in case reports. The age
ranged from 4 days to 73 years, with an average age of 35 years. Most of the cases
are females, of caucasian origin. Half of these cases are symptomatic in terms of anal
or low back pain, painless rectal bleeding, recurrent pilonidal sinus, urinary frequency
and retention of urine. Most of the asymptomatic patients were detected on routine
physical examination. The lesion is an extrinsic cystic fluctuant mass that may appear
either mobile or fixed. A postanal funnel-shaped dimple is stressed as an indicator of
an underlying tailgut cyst5,6.

Results of radiographics studies (Barium enema, CT and MRI) showed a posterior
extrinsic mass compressing the rectum and spina bifida occulta was detected in few
cases3,7,8. The multicystic nature is not specific. The presence of calcification favours
the diagnosis of teratoma. It is not generally a feature of tailgut cyst although it was
reported in association with a tailgut cyst harboring malignancy9.

The presence of ciliated epithelium should not be considered as evidence of
respiratory epithelium and therefore teratomatics. In fact, it is ordinarily found in
fetal and neonatal gastrointestinal tract. The lack of ectodermal differentiation and
the presence of gastrointestinal type epithelial lined cyst favours the diagnosis of
tailgut cyst over teratoma, while the absence of a well organised muscle coat and the
lack of myenteric plexus favours the diagnosis of a tailgut cyst over a duplication
cyst3.

Differential diagnosis from which cysts should be distinguished include: teratomas
(which always contain elements of three germ cell layers), dermoid cysts (which
contain hair and other dermal appendages), duplication cyst (lined with intestinal
epithelium with characteristic villi and crypts, contains well developed layers of
smooth muscle, a myoenteric plexus and a serosa), anal glands cysts (which is thought
to be acquired lesions located closer to the anal sphincter) and chordomas of the
sacrum (which are malignant and arise from embryonic remains of the notochord)10.

Late occurrence of carcinoma in tailgut cyst is rare and can occur at any age in adults;
only a few cases have been described11,12,13.

We reviewed 36 literature reports of tailgut cyst since 1966 to February 2000 and we
found it a very rare condition. Only one case was reported in a newborn14.

CONCLUSION

**Complete surgical excision is the treatment of choice for all tailgut cysts. In most
cases total excision is best done by a posterior approach. An abdominosacral
approach is advised for large cysts.**

REFERENCES

1. Rosai J. Ackerman’s Surgical Pathology. 7th edn. St.Louis: CV Mosby,
1989:1656.