



## Case Report

### Epidermoid Cyst of the Cecum

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#### Abstract

*Reporting a rare case of a Cecal Epidermoid cyst from India.*

**Keywords:** *Epidermoid cyst, Cecum.*

#### Introduction

Epidermoid cysts rarely develop in the cecum, yet they have been reported in other internal organs, including the testes, spleen, accessory spleen, liver and kidneys.<sup>[1]</sup> Only eight cases of cecal epidermoid cysts have been reported in the English Medical literature.<sup>[1-8]</sup> We report the case of a cecal epidermoid cyst in a BSF (Border Security Force) serving personnel with no history of abdominal surgery or trauma. The cyst was discovered incidentally and was resected by using right hemicolectomy. This is the ninth case of cecum-originated epidermoid cyst.

Epidermoid cysts are generally considered to be sequestration cysts that may be congenital or acquired. An acquired epidermoid cyst develops in a patient with a history of abdominal trauma or surgery whereas a congenital epidermoid cyst may be the result of an aberrant embryogenic ectodermal implantation during embryogenesis.

#### Case report

A 42 year old BSF serving personnel was admitted at CAPFs' Composite Hospital, Kadamtala with the history of feeling a lump on the right side of his abdomen. The lumpy feeling becomes more prominent after meal and on putting on uniform & belt. No associated history of fever or of acute abdomen. No history of abdominal surgery.

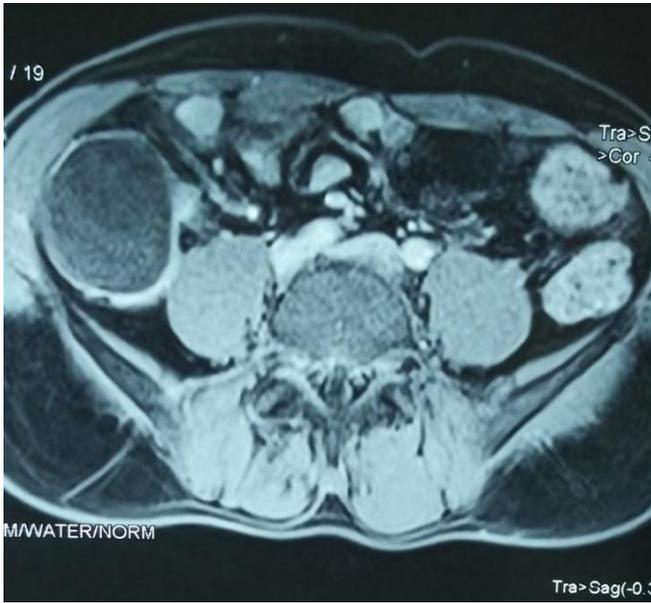
Ultrasonography of the whole abdomen suggested right lumbar region space occupying lesion- Lymphnodal mass, D/D Gut related mass.

MRI whole abdomen suggested a well defined cystic mass in the right iliac fossa inferior to the caecum abutting the cecum and terminal ileum, measuring 5.9x5.2x5.8 cm, showing mild surrounding enhancement of the wall. The perifocal planes were maintained. No obvious communication with the bowel, no fat component, no fluid levels within, no lymphadenopathy.

Differential diagnosis were Enteric duplication cyst & Mesenteric cyst (Fig. 1).

USG guided FNAC from the mass showed anucleated squames and few benign epithelial cells suggestive of Epidermoid cyst of cecum.

Right hemicolectomy was performed.



**Fig 1:** Abdominal MRI revealed a mass with internal low attenuation between the cecum and the terminal ileum.

**Macroscopically**

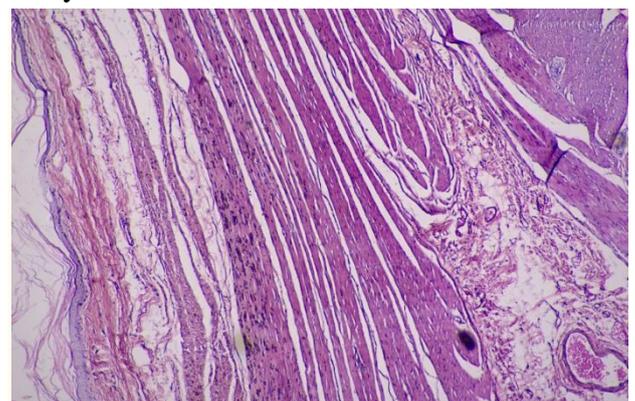
Received a specimen of right hemicolectomy measuring 8 cm in length with a globular surface of the cecum. Cut section of the cecum shows a cyst measuring approx 7 cm in diameter with yellowish cheesy material in it. The cyst wall is seen to be separate from cecal wall and it is 0.1-0.2 cm thick. No tooth, hair, calcification or bone seen in it. No lymph nodes seen (Fig. 2 and 3).

**Histologically**

The wall of the cyst was surrounded by a cecal muscularis propria. Cyst wall was lined by a mature, keratinized and stratified squamous epithelium with a prominent granular layer (Fig 4). The lumen of the cyst was filled with mature lamellated keratin. Skin adnexa were absent. No other ectodermal, endodermal or mesenchymal elements were noted. The pathological diagnosis was an Epidermoid Cyst.



**Fig. 2 and 3:** Hemicolectomy specimen showing the intramural cystic lesion filled with a yellowish cheesy material.



**Fig: 4** The cyst is lined by a keratinizing, stratified, squamous epithelium with a granular layer (H&E, ×100).

**Discussion**

Epidermoid cysts are generally believed to be sequestration cysts that may be congenital or acquired. Congenital epidermoid cysts are related

to implantation of ectodermal elements at the time of closure of the neural groove or to the coalescence of other epithelial fusion lines, which typically occur in the head, neck, and anorectal areas and frequently involve the central nervous system and the intraspinal regions.<sup>[9]</sup> Epidermoid cysts can occur in the testes, spleen, accessory spleen, liver, and kidneys.<sup>[1]</sup> Acquired epidermoid cysts are traumatic or iatrogenic and may be caused by the implantation of the epidermis in locations favorable for growth.<sup>[4]</sup>

Epidermoid cysts of the cecum are extremely rare, with only eight cases were reported in the English Medical literature.<sup>[1-8]</sup> Three of the reported cecal epidermoid cyst cases were associated with a history of abdominal surgery. Two had undergone an appendectomy 12 years and 16 years prior to the diagnosis of a cecal epidermoid cyst.<sup>[2,4]</sup> One patient had had a cesarean section.<sup>[7]</sup> These cases were attributed to iatrogenic implantation of epidermal fragments via a scalpel, needle or clamp during the operation.<sup>[2,4,7]</sup> The remaining patients had no history of abdominal surgery and their cecal epidermoid cysts were considered to be congenital lesions. Andiran et al.<sup>[5]</sup> suggested that an inclusion or closure line of an epidermal structure may occur when the cecum re-enters the abdominal cavity during intrauterine rotation in the final steps of gut development. This encasing of an epidermal structure may result in later development of a cecal epidermoid cyst. Our patient had no history of abdominal surgery; therefore, his epidermoid cyst may have occurred due to an aberrant, embryonic, ectodermal implantation during embryogenesis.

The differential diagnosis of an epidermoid cyst is rarely considered in patients with cecal cystic lesions. Because epidermoid cysts of the cecum are mostly located in the subserosal area.<sup>[1,3,5,6-8]</sup>

On CT imaging, these cysts may be confused with other intra-abdominal cystic lesions, including mesenteric cysts, lymphatic cysts, appendiceal mucoceles or duplication cysts.<sup>[1,10]</sup> Specially, in female patients, they may initially be diagnosed as a right adnexal mass or cyst, so the differential

diagnosis of an ovarian cyst or a cecal epidermoid cyst must be considered.<sup>[3,7]</sup>

To conclude, the development of an epidermoid cyst in the cecum, especially in the intramuscular region, is a rare occurrence; so epidermoid cysts are very rarely included in the differential diagnosis of cecal masses. Therefore, the possibility of an epidermoid cyst should be considered in the differential diagnosis for submucosal or intramuscular masses in the cecal area.

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