CASE REPORT

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Epidermoid cyst of the cecum: A case report

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Pure, benign epidermoid cysts of the abdominal viscera are rare. There have been only six reports of epidermoid cysts of the cecum in the literature. A 31-year-old female with a previous cesarean delivery was admitted to our hospital with inguinal pain. After admission to the hospital, she was operated with the initial diagnosis of adnexal mass. During the operation, no adnexal pathology was identified. A heterogeneous mass originated from the posterior surface of the cecum was observed. It had no connection with the lumen. The mass was then removed with dissection. Macroscopically, the mass was 9x7 cm in diameter and wall thickness was 0.1 cm. The inner and outer surfaces were smooth. It was filled with a dense yellow, thick-fatty material with no tooth, hair, bone, or calcification areas. On microscopic examination, the inner lining was composed of mature keratinized stratified squamous epithelium with a granular layer. In view of the later findings, the case was reported as epidermoid cyst of the cecum. Although epidermoid cysts are rarely seen in visceral organs, this case is the seventh case of cecum-originated epidermoid cyst that has been reported in the literature. The histogenesis of epidermoid cyst is unknown. These cysts are generally accepted to be sequestration cysts that may be either congenital or acquired. Acquired epidermoid cysts are believed to be traumatic or iatrogenic. The cesarean delivery may have been a cause of this condition in the present case. On ultrasonographic examination, these cysts can be misdiagnosed as ovarian cysts.

Key words: Epidermoid cyst, cecum, colon

Çekum kaynaklı epidermoid kist; olgu sunumu

Abdominal organlarda epidermoid kistler oldukça nadir görülmekte olup literatürde bugüne kadar altı tane çekum kaynaklı epidermoid kist olgusu bildirilmiştir. 31 yaşında kadın hasta sağ inguinal ağrı şikayeti ile başvurdu. Özgeçmişinde sezaryen öyküsü vardı. Hasta adneksiyal kitle öntanısı ile opere edildi. Eksplorasyonda sağ adnekste patoloji saptanmadı. Çekum arka yüzünde yerleşen, lümenle ilişkisiz, heterojen kitle izlendi ve diseke edildi. Makroskopik incelemede, açıldığında 9x7 cm ölçüde, 0,1 cm duvar kalınlığı olan, içi sarı renkli, koyu kıvamlı, yağsı materyalle dolu, iç ve dış yüzü düzgün kistik yapı izlendi. Saç, diş, kemik yapıları, kalsifikasyon alanları görülmedi. Mikroskopik olarak kistin iç yüzü keratinize, granüler tabaka içeren, çok katlı yassı epitelle döşeliydi. Deri eklerine ise rastlanmadı. Olgu çekum kaynaklı epidermoid kist olarak rapor edildi. Epidermoid kistler viseral organlarda nadir görülmekle birlikte sunulan olgu literatürdeki yedinci çekum kaynaklı epidermoid kist olgusudur. Epidermoid kistler histogenezleri kesin olarak bilinmemekle birlikte konjenital veya edinsel olabilen sekestrasyon kistleri olarak kabul edilmektedirler. Edinsel olanların travma veya iatrojenik nedenlerle meydana geldikleri düşünülmektedir. Kadınlarda sezaryen de bu nedenlerden biri olabilir. Radyolojik olarak over kistleri ile karışabilirler.

Anahtar kelimeler: Epidermoid kist, çekum, kolon

INTRODUCTION

Pure, benign epidermoid cysts of the abdominal viscera are rare. There have been only limited cases, which originated from the testis, spleen, liver, and kidney (1-4). There have been only six reports of epidermoid cysts of the cecum in the literature (Table 1). Two of them were described in patients who underwent appendectomy, and these cysts were attributed to iatrogenic implantation of the epidermal fragments via surgical tools during the operation (5,6). The cysts in patients with no ope-

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ration history probably resulted from an aberrant embryogenic ectodermal implantation during embryogenesis (7-9).

CASE REPORT

A 31-year-old female was admitted to our hospital with inguinal pain. She had a history of previous cesarean operation. The general physical examination was found to be normal. The external genitals and the vagina were all normal. The cervix was slightly bleeding. On bimanual pelvic exam, the uterus was normal in size; an approximately 5-6 cm solid, mobile mass was palpated on the left side of the pelvis. On the transvaginal ultrasonographic evaluation, the uterus was anteverted and the endometrium was 6 mm. The right ovary appeared as polycystic and the left ovary could not be properly visualized as a separate entity due to the isolated cystic mass (Figure 1). According to the findings, she was operated with an initial diagnosis of adnexal mass. Complete blood count, tumor markers (CA125, CA15-3 and CA 19-9), beta-human chorionic gonadotropin (hCG) and other biochemical parameters were all normal.

On the exploration, the uterus and ovaries were normal. On the posterior surface of the cecum, an 8x4 cm semisolid mass, located approximately 4 cm distal to the appendix, was identified. There was no visible connection between the mass and the lumen of the cecum. After the exploration, the mass was removed by blunt and sharp dissection.

Macroscopically, the cyst was 9x4 cm in diameter with wall thickness of 0.1 cm. The inner and outer surfaces were smooth. It was filled with a dense yellow, thick-fatty material (Figure 2). No calcification, tooth, hair, or bone elements were detected.

Microscopically, the inner lining was composed of mature keratinized stratified squamous epithelium with a granular layer (Figure 3, 4). Smooth muscle fibers like muscularis propria of the bowel were observed outside the epithelium. The outer surface of the cyst was covered by serosa.

Table 1. Reported cases to date of epidermoid cyst of the cecum

Case no	Age (year)	Sex	Operation history	The initial diagnosis	Year of the case	References
1	53	Male	Appendectomy 12 years before	Right lower abdominal mass, cecal defect?	1961	5
2	27	Female	None	Chronic appendicitis? Ovarian cyst torsion?	1965	10
3	71	Male	Appendectomy 16 years before	Extrinsic or intramural cecal mass?	1969	6
4	8	Female	None	Right lower abdominal cyst	1999	7
5	67	Male	None	Duplication cyst?	2002	8
6	75	Male	None	Appendix mucocele?	2006	9

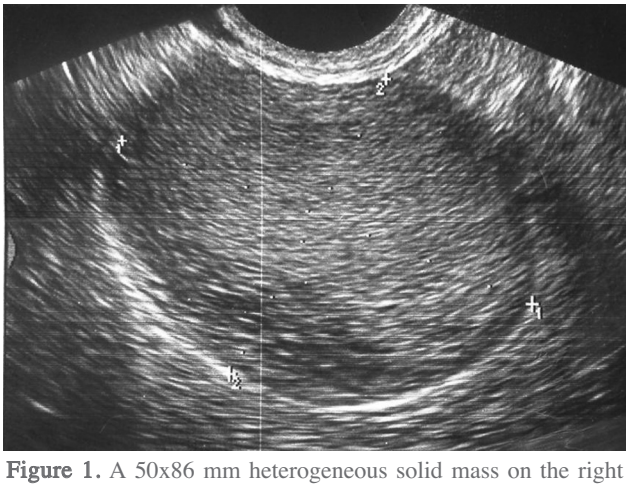

Figure 1. A 50x86 mm heterogeneous solid mass on the right adnexa.

Figure 2. Inner side of the cyst, macroscopic view. A dense yellow, thick-fatty material is seen.

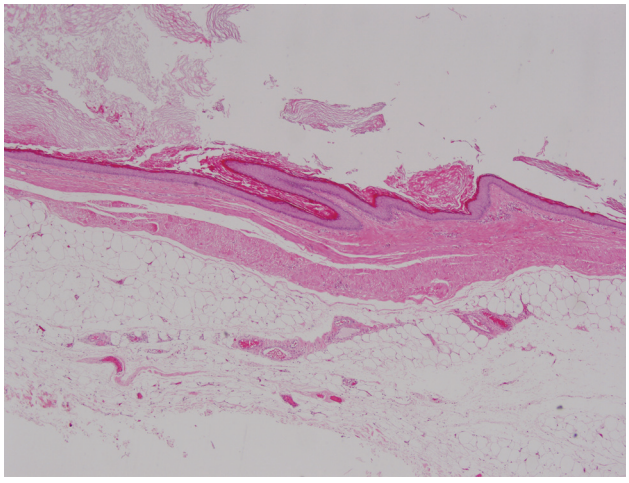

Figure 3. Lower power view of the cyst wall (H&E, x40).

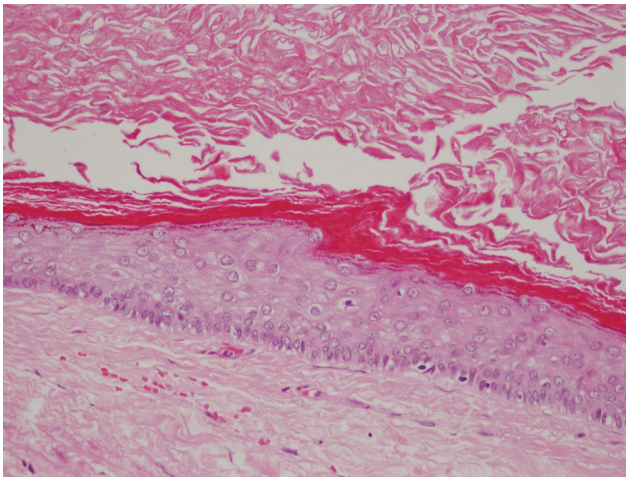

Figure 4. The inner lining of the cyst composed of mature, keratinized, stratified squamous epithelium with a granular layer (H&E, x400).

DISCUSSION

Pure, benign epidermoid cysts of the abdominal viscera are rare. There have been only a limited number of cases, which were originated from the testis, spleen, liver, and kidney (1-4). Cecal location of these cysts is extremely rare, with only six cases reported in the literature to date (5-10).

Epidermoid cysts are sequestration cysts, and they can be acquired or congenital. The congenital epidermoid cysts are related to inclusion of ectodermal elements at the time of closure of the neural groove or when epithelial surfaces coalesce. Acquired epidermoid cysts can be either traumatic or iatrogenic in origin and are due to implantation of epidermis in locations favorable to growth (6).

Two of the reported cecal-originated epidermoid cyst cases had a history of abdominal operation. One of them underwent appendectomy 12 years before at the age of 53 years. In that case, the mass was inseparable from the wall of the cecum, and moreover, the possibility of malignant disease could not be excluded and right hemicolectomy was performed (5). The second case was a 71-year-old man that admitted to hospital with a complaint of rectal bleeding. He had also undergone an appendectomy 16 years before. Roentgenographic examination by barium enema showed a smooth defect in the medial wall of the cecum below the ileocecal valve. This defect had the appearance of an intramural mass, so the patient was referred to surgery. A mass, 6 cm in diameter, was found within the wall of the cecum and resected locally (6). The two cases described above were attributed to iatrogenic implantation of fragments of epidermis via the scalpel, needle or clamp during the operation (6).

A third case was a 27-year-old woman who had been complaining of intermittent pain in the right lower abdominal quadrant for one year. However, while the initial diagnosis was chronic appendicitis, during the operation, the appendix was determined as normal. During the follow-up period, the abdominal pain persisted and a right ovarian cyst was identified on X-ray. She was then operated for the second time with a suspected diagnosis of ovarian torsion. On the exploration, both of the ovaries were found normal, but a cystic mass was observed on the surface of the cecum and extracted. On the histopathologic examination, it was reported as epidermoid cyst, which was suggested to have developed from an embryonal anlage of squamous epithelium displaced in the cecum (10). Another case was an 8-year-old girl who presented with abdominal pain. She had no previous operation history, and represents the only pediatric case in the literature (7).

The last two of the previously reported six cases were elderly men with no operation history. Although undescended testis was thought to be an etiologic factor in these cases, this opinion was excluded clinically and radiologically. These cysts were probably due to an aberrant embryogenic ectodermal implantation during embryogenesis (8,9).

In our case, a 31-year-old female with a previous cesarean surgery was referred to our hospital with inguinal pain. It was thought to have an iatrogenic origin as in the previously defined appendectomy cases. As the reported female case before, our patient had an initial diagnosis of adnexal mass. Hence, the

differential diagnosis between ovarian cyst and cecal epidermoid cyst must be done and kept in mind.

Finally, previous abdominal surgery or trauma can be a cause of acquired epidermoid cysts. In cases with no identifiable factor, an aberrant embryogenic ectodermal implantation during embryogenesis can be a cause. Epidermoid cysts of the cecum must be kept in mind in cases with abdominal pain and suspected ovarian cysts, including in the childhood period.

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