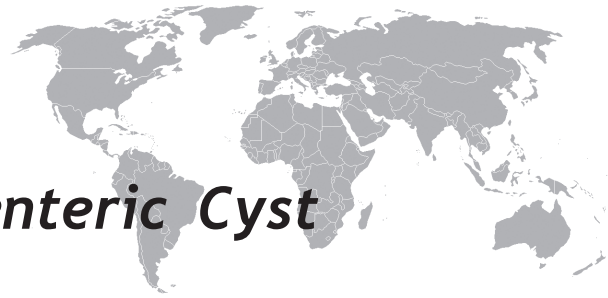

Giant Abdominal Mesenteric Cyst

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ABSTRACT

Mesentric cysts are rare intra-abdominal diseases. They may occur with highly various symptoms and in general, they are found in routine abdominal examinations. Divergent radiological imaging modalities are used in diagnosis and preferred treatment is the complete removal of the cysts. Here, we present a case with giant intra-abdominal mesenteric cyst which was completely removed.

Key Words: *Mesentery, Cysts, Classification, CT.*

INTRODUCTION

Mesentric cysts are rare intra-abdominal diseases. They may cause a wide complaint ranging from general abdominal discomfort to acute abdomen and they are randomly found in routine abdominal examinations. Clinical complaints of patients may alter in accordance with the dimension of cysts, localizations and their relation with environmental tissues. Imaging methods, such as ultrasonogprahy (US) and computerized tomography (CT), would be sufficient in diagnosis and intra-abdominal localisaiton of mesenteric cysts (1-3). In order to eliminate recurrence risk, preferred treatment modality is complete surgical removal of the cysts (1). Here, we present a 43-year old case who was referred to hospital due to abdominal distension and was totally excised following the open surgery and, in accordance with radiological findings, mesenteric cyst was diagnosed.

CASE REPORT

In the physical examination of a 43-year-old male patient referred to hospital with abdominal distension complaint, significant distension and mass was found, especially in the left side, by palpation and inspection. Other than these complaints, the patient had only

dyspeptic complaints. Following the initial examination, a cyst was observed in pelvic region by abdominal US and following CT, which completely fills the abdomen and cyst included images compatible with septations. Liver was significantly pushed to superior by cyst. Right kidney was distorted to superior and anterior by retroperitonel projection of the cyst and collecting system of right kidney was dilated due to the compression on right uretary. Small intestines and colon was also pushed to anterior and lateral. Moreover, there was a relative dilatation in vena cava inferior including the part lying to iliac bifurcation in distal due to the compression of cyst on vena cava inferior in mid-abdomen (Figure 1a,1b,1c,2,3).

Patient was undergone scrotal color doppler ultrasonography in considering compression on right testicular vein, however, no finding could be found suggesting varicosel. Additionally, both diagraphm and cardiac apex was elevated in chest radiography of the patient (Figure 4).

Another suprising point is the lack of significant intestinal complaint though there was a significant distortion in intestines. All laboratory tests, including malignancy parameters, were within normal limits. Subsequently hydatid serology was performed and was negative.

Cyst was excised by open surgery conducted for treatment (Figure 5).

During operation, it was detected that cyst was lying from sub-liver region to seminal vesicules in pelvic region and to retroperitoneum at the posterior. Due to the projection of cyst to retroperitoneum, it was observed that kidney was significantly pushed to superior and lateral together with renal artery and vein. It was found that images examined as septation in US and CT were due to the folding of cyst within the abdomen and that in fact, cyst had no septation. No post-operative complication was observed in patient. Case was diagnosed as mesenteric cyst due to the histopathologic examination.

DISCUSSION

Mesenteric cysts are one of the rare cyst observed in abdomen. Consequently, they are not either mentioned in textbooks or they are discussed briefly (2).

Frequency of mesenteric cysts are determined as 1/100.000 in adults and 1/20.000-35.000 in pediatric population (4,5). There is no difference between sexes in terms of frequency (3-6).

Most frequent localisation is small bowel messentery (70%) and within small bowel it is commnly localised in ileal mesenter (50-60%). However, they can also be found in mesentery from the jejunum to the rectum (2,3,5,7).

The most common classification of thse cysts is histopathologic classification dividing cysts into 6 groups. These groups are as follows:

1. Cysts of lymphatic origin *(simple lymphatic cyst and lymphangioma)*,

2. Cysts of mesothelial origin *(simple mesothelial cyst, benign cystic mesothelioma, and malignant cystic mesothelioma)*,

3. Enteric cysts *(enteric cyst and enteric duplication cyst)*,

4. Cysts of urogenital origin,

5. Dermoid cysts *(mature cystic teratoma)*, and

6. Pseudocysts *(infectious and traumatic cysts)* (2,7).

Etiologic origins of these cysts are also divergent (2). Most commonly observed ones are with lymphatic and

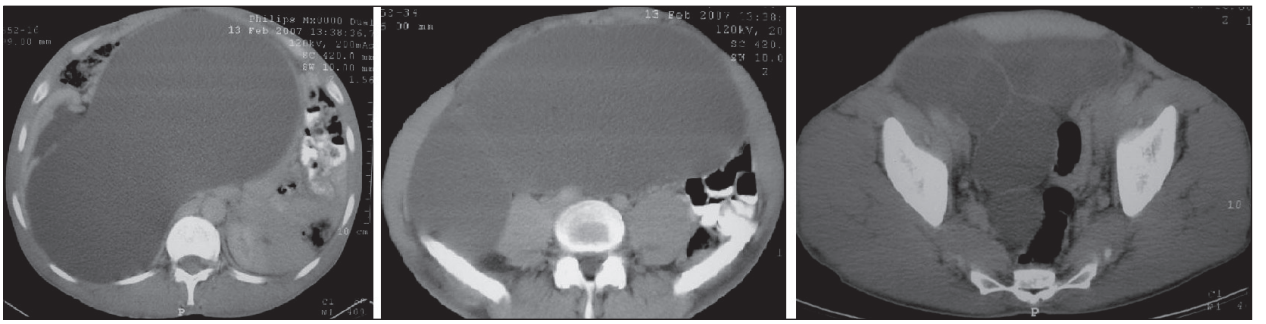

Figure 1a, b,c . *Axial CT images of cyst in various levels.*

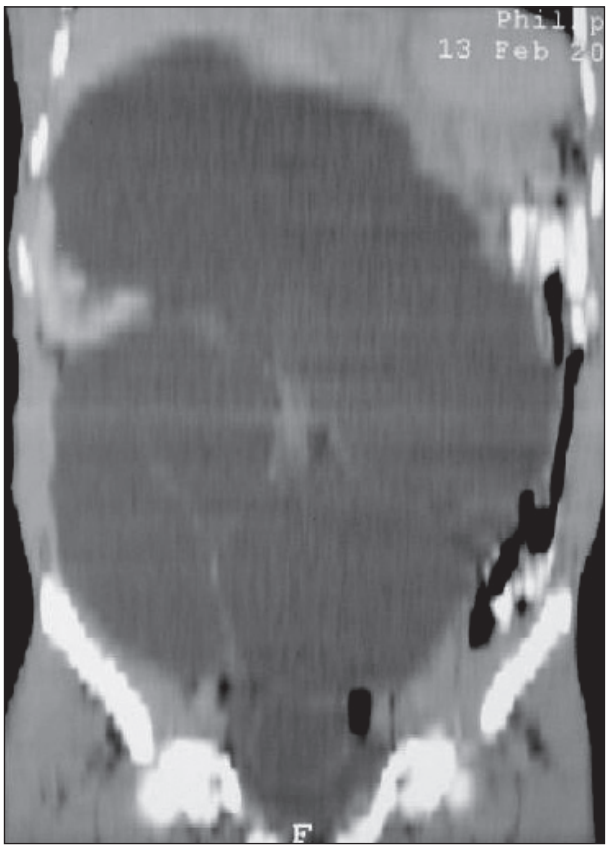

***Figure 2**. Reformatted coronal CT image of cyst.*

***Figure 3**. Reformatted sagittal CT image of cyst.*

mesothelial origin (2,8). However, rarity of mesenteric cysts in general causes deficiens of information on classification and difficulties (2).

Mesenteric cysts can also be asymptomatic. Symptomatic ones does not have typical findings or symptoms and they may have differing clinical presentations. Among which, complaints such as abdominal discomfort, acute and chronic pains, nausea, vomiting, distension, shock due to rupture or bleeding of the cyst, external compression, can be included. These complaints are, in general, related to dimensions and locations of the cysts (1,3,6). Also, admission complaint of our patient was distension in abdomen and patient also had associated dyspeptic complaints. Patient had no intestinal complaint despite the pushing and compression.

In diagnosis and determining nature of mesenteric cysts, ultrasonography (US), computerized tomography (CT) and magnetic resonance imaging (MRI) plays a significant role. Ultrasonography provides contribution in determining cystic nature of lesion, presence or absence of septation and determination of location. However, ultrasonography cannot be sufficient alone in determining localisation in most of the cases. At this point, computerized tomography and magnetic resonance plays significant role. It is sufficient in determining mesenteric localisation of lesion, its relation with environmental structures and defining the projections. Additionally, it is also possible to determine absence or presence of septation, to measure wall thickness. However, radiological examination is useful in mesenteric cyst diagnosis and accurate diagnosis is possible only with histopathological evaluation following the surgery (1,3,6,8-11).

In our case, there were also lesions compatible with cystic nature without significant contours on abdominal projections were detected by ultrasonography. In subsequent computerized tomography, it was observed that lesion was projecting from inferior of liver to pelvic region and to retroperitoneum in posterior.

***Figure 4**. Chest radiography.*

Surgical procedures are used in treatment of mesenteric cysts; among them simple drainage, marsupialization or resection are included. Marsupialization is not often preferred due to risk of infection and recurrent operation risk due to drainage of sinuses. If simple drainage is performed, the cyst usually recurs. For his reason, it is not preferred. Basic aim in the treatment of mesenteric cysts is the total removal of cyst as recurrence rate following a succesful operation is very low (2-3,6,12). Besides, it also provides additional advantage as total resection removes malign transformation (2,3,13). In terms of disadvantage, segmental resection in intestines may be required in some patients during operation (2,14).

Additionally, resection can be conducted by laparoscopic surgery and it is possible to remove cysts in selected cases without complication thanks to the advances in the area and again post-operative period can be more comfortable. However, in cases where cyst cannot be completely excised, the requirement for second operation and incomplete excision in retroperitoneal cases are disadvantages of laparoscopic surgery (6,15).

In the case of our patients, cyst was totally removed by open surgery and there were no post-operative complication. But, it was determined post-operatively that images, considered as septation in US and CT, were in fact pseudo-images of intra-abdominal folded

***Figure 5**. Image of patient during operation.*

cysts and that in fact cyst would not include septation.

In this presentation, our aim is to inform that mesenteric cysts should be kept in mind for cystic intra-abdominal lesions and that intra-abdominal foldings of large cysts may cause pseudo-septation images.

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