Primary Rectal Teratoma Presenting as an Irritable Bowel-like Syndrome: A Case Report

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Abstract

Background: Teratoma is a tumor comprised of three germinal layers classified as mature or immature in most cases. Most mature solid teratomas are benign but may turn malignant; therefore, complete resection is advised in these cases. They usually occur in women. Primary rectal teratomas are infrequent, and only a few cases have been described in the literature. Teratomas are the most common cystic that rise in the ovary, testicle, and retroperitoneum. They can also be solid and are better known as dermoid cysts.

Case Presentation: We report a 34-year-old woman who were presented with intermittent constipation and diarrhea in Urmia Imam Khomeini Hospital in January 2020. After examination, a solid intra-rectal teratoma occurring mainly in the rectum was detected in this case. The patient underwent segmental colectomy and histology, which revealed squamous epithelium, fat cells, hair follicles, cartilaginous material, and granuloma suggestive of mature teratoma.

Conclusion: The present case was a solid primary rectal teratoma, an uncommon disease with many misdiagnoses that can be differentiated from other diseases. In this case report, it is differentiated from irritable bowel syndrome (IBS).

Keywords: Rectum, Teratoma, Irritable bowel syndrome

Background

Teratoma is the most common ovarian tumor and may less frequently originate in the gastrointestinal tract (1). Most teratomas are cystic and composed of mature differentiated elements (2). Rectal teratoma is highly rare, and only a few cases have previously been reported in this regard in the literature. In this study, we report a case of primary rectal teratoma presented with intermittent diarrhea and constipation with abdominal pain, which is rare and has not been reported so far.

Case Presentation

A 34-year-old Iranian woman was presented with a five-month history of intermittent non-bloody diarrhea, constipation, and mild abdominal pain in Urmia Imam Khomeini Hospital in January 2020. She also complained of weight loss of about 2 kg over the last six months. Six years ago, the patient was diagnosed with a known case of Mediterranean fever which was under the treatment of colchicine. The patient had infertility for three years and underwent various tests for its treatment one year ago. Due to ascites and abdominal pain, the patient was suspected of having peritoneal tuberculosis and underwent diagnostic laparoscopy, but no acid-fast bacilli biopsy was reported for her.

Her family history was noncontributory. Three months before admission to the hospital, she was examined and diagnosed with irritable bowel syndrome (IBS) and received drug treatment. The frequency of abdominal pain decreased after the initial treatment. However, the patient’s pain gradually increased after one month, and she was re-examined and hospitalized with the same clinical presentation. According to physical examinations, she was fully conscious with a 100/70 mmHg blood pressure, a pulse rate of 90 beats/min, and a temperature of 37.6°C (Table 1). Abdominal examination showed slight tenderness of the lower abdomen. Based on digital rectal examinations, in addition to skin tags, the findings represented mild perianal erythema.

An ultrasound of the abdomen and pelvic revealed an echogenic mass with internal fluid on the right ovary, (78 * 48 mm) and echogenic internal material extended up to the left ovary. Another hypoechoic mass (98 * 37) mm including multiple collections with echo-free cysts with echogenic internal septate was detected on the right side of the pelvic in the omentum and intraperitoneal.

Abdominopelvic magnetic resonance imaging (MRI) demonstrated two cystic lesions located in the anterior uterus with a few thin septa suggestive of peritoneal inclusion cysts with some loculated fluid areas in the lower abdomen in the inter loop space. A cystic lesion (50*27*24 mm) was observed in the left adnexa (probably originated from the ovary) with an 8*5 mm T1 hyperintense component (probably, it was hemorrhage), showing rectal wall thickening. There was also an intramural-like area (33*18*14 mm) in the posterior...
rectal wall with a 10-12 cm distance from the anal verge, containing air with intraluminal communication and probably attached to the left adnexal mass.

The patient underwent endoscopic ultrasonography that represented a large heterogeneous mass lesion (88*45 mm) above the uterus with the areas of cysts degeneration and calcification invaded into the rectal wall and extended to the lumen resembling an exophytic pattern bulging from the serosa (Figure 1).

On colonoscopy, a pedunculated polypoid (4×5 cm) lesion with a distance of 12 cm from the anal verge was detected that contained a tooth-like structure, and a few hairs were projected from the surface of the lesion (Figure 2).

Due to invasion in the mass and its large size, endoscopic tumor resection was extremely difficult; then, a surgical plan was inserted, and the patient underwent laparotomy, which revealed a mass in the rectum and an adhesion band with mesenteric granuloma. Segmental colectomy was performed, making colostomy after the release of abundant adhesion. The patient did not have any postoperative complications. Thus, she was discharged from the hospital a few days after the surgery and obtained adequate gas and feces control.

The histological examination of mesocolon mass showed squamous epithelium, granulomatosis inflammation, hair follicles, cartilaginous material, and columnar lining of the glandular structures suggestive of mature teratoma. After six months, the patient underwent computerized tomography (CT) scan for evaluation; no obvious intrapelvic abnormality was revealed, and side-to-side anastomosis was made after this time.

**Discussion**

Mature teratoma is a three-layered germ cell tumor commonly found in the ovary, testes, or mediastinum (3). Due to the lack of germ cells in the gastrointestinal tract, teratoma occurs less commonly in the digestive tract (4). It is believed that primary rectal teratoma only occurs when germ cell aberrantly enters the digestive tract. Primary rectal teratomas are scarce, and only a few cases have been described in the literature (5). Only 54 cases were reported in the world, and four cases have been published in Korea (6, 7). Rectal teratoma is more common in women, with only one case reported in men. Teratoma is highly suspected when there is hair on the

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**Table 1. Laboratory Finding of the Patient**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hematologic Tests</strong></td>
<td></td>
</tr>
<tr>
<td>White blood cell count</td>
<td>9600/mm³</td>
</tr>
<tr>
<td>Neutrophil</td>
<td>82%</td>
</tr>
<tr>
<td>Lymphocyte</td>
<td>16%</td>
</tr>
<tr>
<td>Monocyte</td>
<td>2%</td>
</tr>
<tr>
<td>ESR</td>
<td>38 mm/h</td>
</tr>
<tr>
<td>Hemoglobin</td>
<td>11.5 g/dL</td>
</tr>
<tr>
<td>CRP</td>
<td>25 mg/L (normal up to 10 mg/L)</td>
</tr>
<tr>
<td>Platelets</td>
<td>165000/mm³</td>
</tr>
<tr>
<td>Blood culture</td>
<td>Negative</td>
</tr>
<tr>
<td><strong>Biochemistry Tests</strong></td>
<td></td>
</tr>
<tr>
<td>Total protein</td>
<td>5.5 g/dL</td>
</tr>
<tr>
<td>Albumin</td>
<td>3.2 g/dL</td>
</tr>
<tr>
<td>Indirect bilirubin</td>
<td>0.5 mg/dL</td>
</tr>
<tr>
<td>Blood sugar</td>
<td>80 mg/dL</td>
</tr>
<tr>
<td>BUN</td>
<td>32 mg/dL</td>
</tr>
<tr>
<td>Creatinine</td>
<td>1.2 mg/dL</td>
</tr>
<tr>
<td>Amylase</td>
<td>63 IU/L</td>
</tr>
<tr>
<td>Aspartate transaminase</td>
<td>22 IU/L</td>
</tr>
<tr>
<td>Alanine transaminase</td>
<td>28 IU/L</td>
</tr>
<tr>
<td>Alkaline phosphatase</td>
<td>159 IU/L</td>
</tr>
<tr>
<td>Direct bilirubin</td>
<td>0.4 mg/dL</td>
</tr>
<tr>
<td>Total bilirubin</td>
<td>0.9 mg/dL</td>
</tr>
<tr>
<td>Na</td>
<td>138 mEq/L</td>
</tr>
<tr>
<td>K</td>
<td>3.9 mEq/L</td>
</tr>
<tr>
<td>Ca</td>
<td>9.4 mg/dL</td>
</tr>
<tr>
<td>P</td>
<td>5 mg/dL</td>
</tr>
</tbody>
</table>

Abbreviations: ESR, erythrocyte sedimentation rate; CRP, C-reactive protein; BUN, blood urea nitrogen; Na, sodium blood test; K, potassium blood test; CA, cancer antigen.
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Ethical Approval
Written informed consent for the publication of the article and any associated images were obtained from the patient.

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References