

## Unusual Peritoneal Encapsulation: Case Report

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### Abstract

Peritoneal encapsulation is an exceedingly rare developmental abnormality in which the small bowel is completely encased in an accessory peritoneal sac. Diagnosis is intraoperative as the clinical signs rarely help in diagnosis and in majority excision of sac and release of adhesions is all that is required.

**Keywords:** Peritoneal Encapsulation; Peritonitis

### 1. Introduction

Peritoneal encapsulation (PE) is a distinctive pathology and was first described in 1868 [1]. PE is a rare condition and is characterized by a membrane encasing the small bowel forming an accessory sac. The diagnosis is intra-operative in majority as there are no clear clinical signs to diagnose pre operatively.

### 2. Case Report

A 38 year old gentleman presented to emergency room of our institute with the complaints of dull aching pain abdomen around the central abdomen for about 72 hours without any constitutional symptoms with the clinical examination findings suggesting nothing except minimal distension. Patient carried along with him abdominal radiograph {essentially normal} and ultrasound suggesting fluid collection and appendicular diameter of 7 mm. The patient was taken to operating room on an emergency basis with the doubtful clinical diagnosis of appendicitis and localized peritonitis. Upon opening the peritoneum of the abdomen with Right Paramedian incision there was a sac encasing the entire small bowel from duodenojejunal flexure till terminal ileum. (Figure 1) Appendix was uninflamed and the large bowel and stomach were normal and there was absolutely no collection. Sac was dissected and there were three layers of the membrane with the third layer thin and small bowel was completely visible through it. Third layer was opened and about 150 ml of clear serous fluid drained, small bowel was completely examined

and was essentially normal, excess sac was excised. (Figure 2) Patient made a good post operative recovery.



**Figure 1: Whole of the small bowel in a separate sac.**



**Figure 2: Following a layered dissection with clearly visible bowel loops.**

### 3. Discussion

Peritoneal encapsulation is an exceedingly rare developmental abnormality in which the small bowel is encased in an accessory peritoneal sac between the omentum and mesocolon [2]. Radiographic studies are usually normal or show non-specific features of intestinal obstruction [3]. And the diagnosis of PE pre-operatively may be impossible because plain abdominal x-ray may be normal or only show dilated small bowel loop [4].

The two clinical signs, which help in diagnosis, is a fixed, asymmetrical distension of the abdomen, which does not vary with peristaltic activity and a difference in the consistency of the abdominal wall to palpation [5]. The diagnosis is intra-operative in majority and excision of the sac with enterolysis is all that is required [6]. A better awareness and recognition methods are required to diagnose preoperatively that will facilitate effective management.

### References

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