

## Laparoscopic Management of a Spontaneous Chyloperitoneum During Pregnancy

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Received May 13, 2020; Revised May 26, 2020; Accepted May 28, 2020

### ABSTRACT

Chyloperitoneum in pregnancy is a very rare entity, described in only a few reports in the literature. Pregnancy has been considered as a relative contraindication for laparoscopic procedures. Despite this, the use of laparoscopy for the treatment of acute disease in pregnant women has been progressively increased. We present a laparoscopic management and resolution of an acute peritonitis in a patient who was initially suspected of having a complicated acute appendicitis and was finally diagnosed as a case of chyloperitoneum.

The objective of this article is to report a rare entity and insist on the possibility of laparoscopic management in these cases.

**Keywords:** Chylous peritonitis, Chylous Ascites, Laparoscopic Surgery, Pregnancy

### CASE REPORT

Chyloperitoneum in pregnancy is a very rare entity, described in only a few reports in the literature [1-5]. The objective of this article is to report a rare entity and insist on the possibility of laparoscopic management in these cases.

A 37-year-old woman in second trimester of pregnancy was referred to emergency room, because of generalized and continuous abdominal pain less than 24 h of evolution without any associated symptoms. Her pregnancy at this time was clinically uncomplicated and she underwent normal routine follow-up. The family history was unremarkable. Past medical history included a spontaneous abortion on the first gestation, two years before. Important abdominal tenderness and diffuse guarding suggested acute peritonitis.

Gynaecological ultrasound examination did not show pathological findings. The increasing tenderness associated with a diffuse guarding (that pointed to a suspected acute perforation of a hollow viscus) called for an immediate laparoscopy instead of a preoperative CT scan.

The patient was placed in a left lateral decubitus to improve venous return. The height of the fundus of the uterus was determined prior to trocars insertion. Pneumoperitoneum was performed using a Veress, a total of three trocars (an optical and two operating trocars) were placed. At exploration there was a large accumulation of milky fluid filled the peritoneal

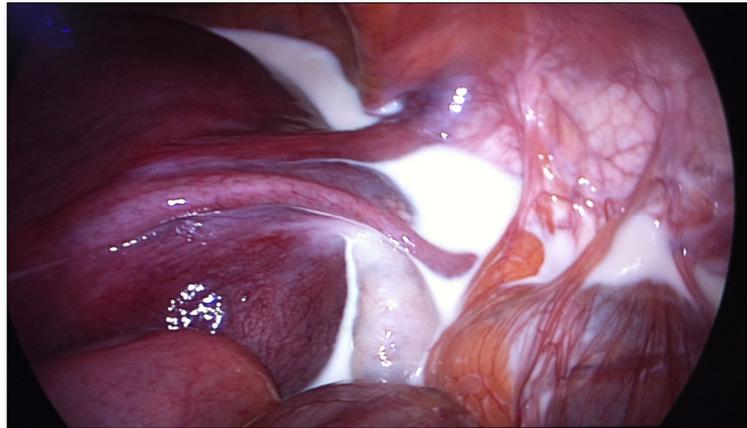
cavity associated with distension of the small bowel (**Figure 1**). Samples of the chylous liquid were taken for biochemical, bacteriological and cytological examination. On gross examination, no abnormalities could be detected in any of the solid or hollow abdominal viscera, and an appendectomy was performed in the same surgical act. There were no dilated lymphatics, and no source of leakage was found. A thorough peritoneal wash with warm saline was performed, and drain was positioned.

Postoperative period was uneventful, drain was removed on the 6<sup>th</sup> postoperative day (in the presence of a clear aspect of the peritoneal fluid) and the patient was discharged on the 7<sup>th</sup> postoperative day and the patient is doing well two years after pregnancy.

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**Citation:** Vilalta FJB, Cano JJS, Calvet JD, Butillé RP, Ferré E et al. (2020) Laparoscopic Management of a Spontaneous Chyloperitoneum During Pregnancy. *Int J Surg Invasive Procedures*, 3(3): 141-142.

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**Figure 1.** Laparoscopic view of chyloperitoneum in pelvis.

## DISCUSSION

Chylous ascites is characterized by lymphatic fluid leaking into abdominal cavity and has a prevalence of about 1/187,000 admissions to hospital care [5-7]; when the output of chyle takes rapidly, we can observe an acute peritoneal reaction called acute chylous peritonitis.

The causes of chylous ascites can be roughly categorized into traumatic and atraumatic (congenital, neoplastic, inflammatory vasculitic, autoimmune lesions and idiopathic). In daily clinical practice, surgeons are most often faced with chylous ascites secondary to a surgical procedure or abdominal trauma [8]. To date, only a few cases of chyloperitoneum during pregnancy have been reported, and all of them showed underlying disorders. The first ones involving complications during pregnancy, one with intestinal volvulus and others as a consequence of pancreatitis [1-3]. Other cases discovered during a cesarean section [4,5]. In our case, the patient did not refer abdominal trauma and no other cause was found during surgery and could then be considered idiopathic. Free chyle is relatively non-irritating to the serosal surface, but pain may result from the stretching of the retroperitoneum and the mesenteric serosa [8]. In the present case, free chyle in the peritoneal cavity plus tenderness and rebound indicates that chyle irritated the peritoneum to account for the symptoms of an acute abdomen, thus mimicking a complicated acute appendicitis, being noticeable since the onset of symptoms.

This case points out the role of laparoscopy for surgical problems during pregnancy. Diagnostic laparoscopy provides direct visualization of intra-abdominal organs. Furthermore, it has been shown that laparoscopy can be performed safely during pregnancy with minimal morbidity to the foetus and mother. There are many advantages of laparoscopy in the pregnant patient including: Decreased foetal respiratory depression due to diminished postoperative narcotic requirements, lower risk of wound complications, diminished postoperative maternal hypoventilation, shorter hospital stay, and decreased risk of thromboembolic events.

In conclusion, there are many reports in literature describing the role of laparoscopy for surgical problems during pregnancy; but (to the best of our knowledge) there is no case about spontaneous chylous-ascites-related peritonitis in pregnant women with a complete laparoscopic management. In our experience, this approach can be an alternative of diagnosis and treatment for these patients.

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