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Fitz-Hugh-Curtis Syndrome: A Case Report Emphasizing Timely Recognition and Management in Pelvic Inflammatory Disease

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ABSTRACT

Fitz-Hugh-Curtis syndrome (FHCS) is a rare complication of pelvic inflammatory disease (PID), that presents with right upper quadrant abdominal pain, often mimicking hepatic, or biliary conditions. Timely diagnosis is crucial to prevent complications. This case report represents 34 years old female came to ER complaining from right upper quadrant abdominal pain and nausea for one month.

KEYWORDS: Case report, Fitz Hugh Curtus syndrome, RUQ abdominal pain, pelvic inflammatory disease.

BACKGROUND

Fitz Hugh Curtis syndrome (FHCS) or perihepatitis is inflammation of liver capsule and adjacent peritoneal surfaces that is associated with string like adhesion formation, the inflammation spares liver parenchyma [1]. FHCS is a chronic complication of pelvic inflammatory diseases, which is inflammation of upper genital tract in women. It is most often caused by chlamydia trachomatis and Neisseria Gonorrhoeae. The pathogenesis of Fitz Hugh Curtis syndrome is still poorly understood. Several mechanisms have been proposed. Microorganisms associated with PID are thought to spread from the pelvic organs to the liver's capsule through a process of ascending infection, retrograde spread within the peritoneal cavity, and the formation of fibrous adhesions [2].

Clinical presentation of patients varies from severe pain in right upper quadrant of abdomen, fever, chills, and malaise. In some cases, pain during deep inspiration occurs, where involvement of diaphragm has been noticed [3]. It's important to recognize FHCS promptly, as delayed diagnosis can lead to complications such as liver abscess formation, adhesions, intestinal obstruction [4] and chronic abdominal pain. Initial investigations should include ultrasound which is the study of choice to evaluate hepatobiliary system for abnormalities and to exclude them from the differentials. The final diagnosis can be made through laparoscopic visualization of string-like adhesions and confirmation through hepatic capsular biopsy and culturing for Chlamydia Trachomatis antibodies. [5].

CASE PRESENTATION

34 years old female, with past medical history of pelvic inflammatory disease, which was diagnosed and treated for 3 years ago by a gynecologist. Presented to the ER of Imam Abdulrahman Al Faisal Hospital (Riyadh, Kingdom of Saudi Arabia) on September 17, 2023, with sever recurrent upper right quadrant abdominal pain and nausea persisting for one month, increased with movement and deep inspiration. The patient has no past surgical history and no known allergies. On examination patient was vitally stable and, abdomen was soft lax and non-tender. Abdominal CT with contrast showed left Para-duodenal hernia with sign of Small bowel obstruction (Figure 1).

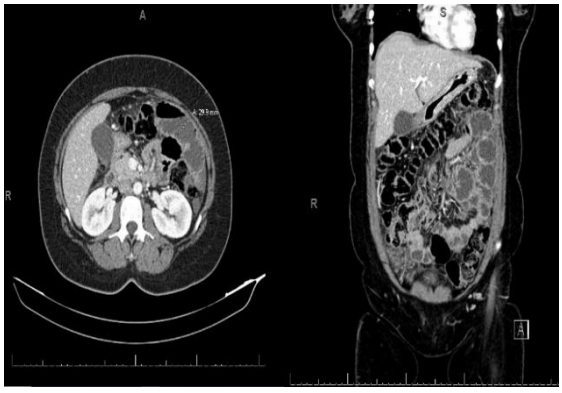

Figure 1.

Giving the presentation, history, and clinical findings; patient was evaluated by the surgical team and scheduled for laparoscopic exploration and hernial repair. Minimally invasive elective laparoscopic exploration under general anesthesia was performed. Three trocars were placed, the first was 10mm trocar placed supraumbilical and the latter two trocars were 5mm each placed on the right and left sides of lower abdomen by open technique. Upon exploration, there was a hernia in the small bowel with cross adhesion. Moreover, multiple bands were identified all over the abdominal wall with string like adhesions between liver surface and peritoneum (Figure 2).

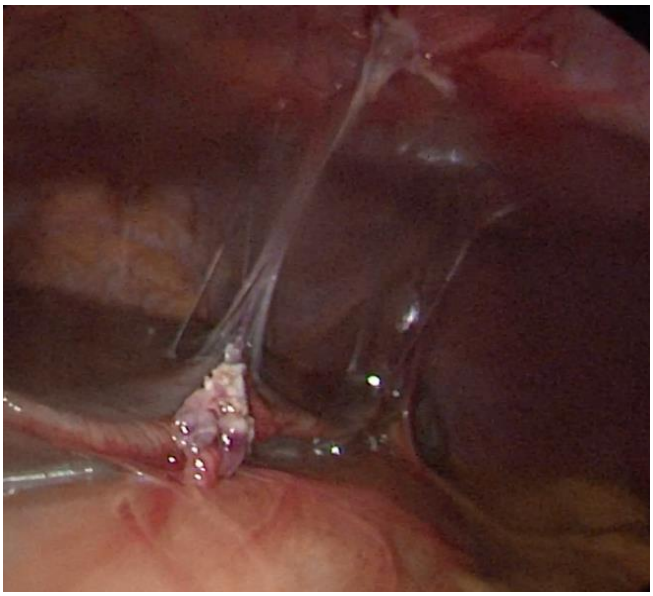

Figure 2. "Violin string" adhesion between liver capsule and peritoneum

Bands were released from mesentery and descending colon (Figure 3); abdominal washing was done, and drain was placed.

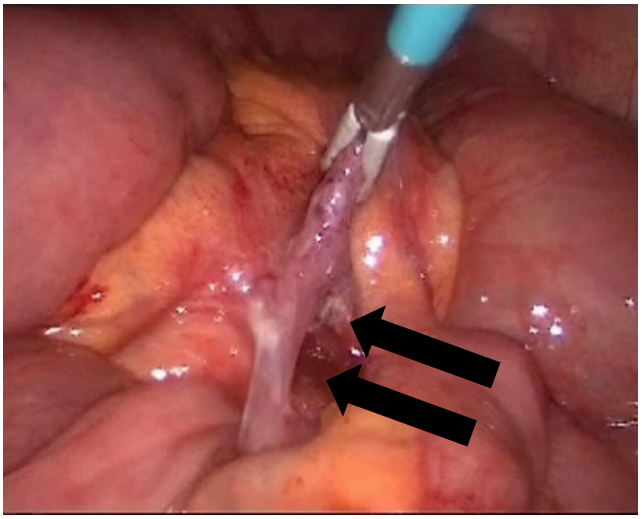

Figure 3. Intra operative illustration of band release (At the tip of the arrow)

The postoperative course was uneventful, drain was removed on the 3rd day post operation, and she was discharged on Amoxicillin+ Clavulanic acid. An appointment for follow up in outpatient clinic after 1 month was scheduled. A blood specimen was collected for the detection of Chlamydia trachomatis antibodies, yielding a positive result. Consequently, the diagnosis of Pelvic Inflammatory Disease complicated by Fitz-Hugh-Curtis Syndrome was established.

DISCUSSION

Fitz Hugh Curtis syndrome (FHCS), or perihepatitis is a rare but clinically significant complication of pelvic inflammatory disease. It is primarily attributed to the ascending infection of the female genital tract, leading to inflammation and adhesions involving the peritoneal surfaces around the liver.

The clinical presentation can vary, but it often includes right upper quadrant (RUQ) abdominal pain, which may mimic other hepatobiliary and gastrointestinal conditions [4]. Hence, FHCS can be missed without a high index of suspicion. Timely diagnosis is crucial to prevent the progression of FHCS and associated complications. Imaging modalities, such as abdominal CT scans, can aid in confirming the diagnosis by demonstrating characteristic perihepatic adhesions and inflammation.

The mainstay of treatment for FHCS is the prompt initiation of appropriate antibiotic therapy to target the underlying PID. Analgesics and anti-inflammatory medications can help alleviate pain and discomfort. In cases of severe or refractory FHCS, surgical intervention may be considered to address adhesions and abscess formation.

CONCLUSION

Fitz-Hugh-Curtis syndrome is a rare but clinically relevant complication of pelvic inflammatory disease. This case highlights the importance of considering FHCS in the differential diagnosis of right upper quadrant abdominal pain in young women with PID risk factors. Early recognition and appropriate management can lead to a favorable outcome, preventing complications and ensuring patient recovery.

Further research is needed to explore the optimal diagnostic and treatment strategies for this uncommon syndrome.

CONSENT

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

ETHICAL CLEARANCE

This case report is exempt from ethnic approval in our country.

CONFLICT OF INTEREST DECLARATION

The authors declare that they have no conflict of interests.

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List of abbreviations

CT	Computerized tomography
ER	Emergency room
FHCS	Fitz Hugh Curtis syndrome
PID	Pelvic inflammatory disease
RUQ	Right upper quadrant

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