Fitz-Hugh-Curtis Syndrome: A Case Report

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ABSTRACT
The Fitz-Hugh-Curtis syndrome or perihepatitis is a rare chronic manifestation of pelvic inflammatory disease. It is an inflammation of the liver capsule and peritoneal surfaces of the anterior right upper quadrant with adhesion formation accompanied by right upper quadrant pain.

We report a case resistant to the antibiotic therapy instituted and managed with the laparoscopic surgical approach and photographic documentation of the “violin string-like adhesions” between the anterosuperior hepatic surface and the abdominal wall.

The Fitz-Hugh-Curtis syndrome is the rarest complication of pelvic inflammatory disease. Despite the extensive description of these adhesions in the literature, their photographic documentation is scarce. The authors present here a case with photographic documentation of the “violin string-like adhesions”, furthering medical literature.

Keywords: Fitz-Hugh-Curtis syndrome; Perihepatitis; Pelvic inflammatory disease; Laparoscopy

INTRODUCTION
The Fitz-Hugh-Curtis Syndrome (FHCS) or perihepatitis is a chronic manifestation of Pelvic Inflammatory Disease (PID) [1,2]. It consists of the inflammation of the liver capsule and peritoneal surfaces within the anterior right upper quadrant, sparing the liver parenchyma, with adhesion formation accompanied by right upper quadrant pain [3,4].

The Fitz-Hugh-Curtis syndrome is an uncommon complication of pelvic inflammatory disease [5]. Its association with gonococcal infection was first reported in 1934 and is most commonly associated with Chlamydia trachomatis infection [6,7]. The right upper abdominal pain presents as the main symptom and is aggravated by movement and deep breathing. Sporadically, the pain may radiate to the right shoulder [8]. Liver function tests are frequently normal or only slightly elevated [1].

The pathophysiology of this disease is not fully understood but may involve either direct extension of infected material from the cul-de-sac through the peritoneum and/or lymphatics or an immunologically mediated mechanism [6].

The diagnosis is normally assumed based on clinical findings, medical history, and response to treatment. However, the definitive diagnosis is only possible through direct visualization, via laparoscopy or laparotomy, of the characteristic “violin string-like adhesions”, which affect mostly the anterior surfaces of the liver or by hepatic capsular biopsy and subsequent culture [6,9].

CASE REPORT
A 21-year-old healthy nulliparous woman was admitted to the emergency department with lower abdominal pain that started one week prior, fever, and alteration in vaginal discharge. Upon physical examination, she presented a tympanic temperature of 38.6°C, painful lower abdomen palpation, moderate tenderness of the right upper quadrant, purulent leukorrhea, and painful cervical mobilization. Her medical history is unremarkable, except for unprotected sexual contact with a new partner. Blood tests revealed leukocytosis with neutrophilia, increased C-Reactive Protein, and slightly elevated liver enzymes. Vaginal exudate for Chlamydia Spp and Neisseria Spp, as well as serologies for Hepatitis B and C, Syphilis, and HIV, were carried out. Transvaginal sonography demonstrated a normal-sized uterus, linear endometrium, a fluid lamina in Douglas Pouch, probable bilateral hydrosalpinx, an adnexal heterogeneous mass on the left side, with 73 mm of maximum dimension and ovaries with no apparent alterations.

The patient was hospitalized with a diagnosis of Pelvic Inflammatory Disease complicated by a tubo-ovarian abscess and started empirical antibiotic therapy (cefoxythime and doxycycline). By the 3rd day due to maintenance of the clinical condition with analytical
aggravation, an increase in C-Reactive Protein, surgical intervention was decided. An exploratory laparoscopy was performed and showed extensive adhesions between the pelvic structures (Figure 1), a left tubo-ovarian abscess (Figure 2), and also adhesions between the anterosuperior hepatic surface and the abdominal wall (Figure 3). Sometimes referred to as “violin string-like adhesions,” this finding is characteristic of the Fitz-Hugh-Curtis syndrome, a condition in which perihepatitis develops in association with pelvic inflammatory disease. A left salpingectomy and perihepatic lysis of adhesions were conducted. The postoperative period was uneventful and the patient was discharged 5 days after surgery. At follow-up, 2 months after surgery, the patient was asymptomatic and all serologies were negative. Chlamydia trachomatis was isolated on the vaginal exudate culture.

DISCUSSION AND CONCLUSION

Pelvic inflammatory disease is a polymicrobial infection of the upper genital tract, which usually affects sexually active young women. In the majority of cases, PID is the result of the ascension of microorganisms from the lower genital tract. In this case, the disease was complicated by a tubo-ovarian abscess and perihepatitis [10].

The pelvic inflammatory disease should always be considered in a sexually active woman with lower abdominal or pelvic pain. The differential diagnosis is made mainly with ectopic pregnancy, ovarian torsion, rupture of an adnexal mass, endometriosis, appendicitis, and gastroenteritis [11]. The presence of pain in the upper right quadrant represents a diagnostic challenge since it is a manifestation of several other hepatobiliary and gastrointestinal diseases [12]. However, the presence of other genitourinary symptoms, such as vaginal discharge and painful cervical mobilization, should lead to consideration of this syndrome.

Risk factors for PID are the same as those for the acquisition of sexually transmitted diseases, such as multiple sexual partners, young age, or unprotected sex [13]. In this case, a recent unprotected sexual contact with a new partner was mentioned.

Antibiotic therapy is the basis of PID treatment. The wide variety of implicated pathogens are typically covered by the empiric therapeutic regimens used. They depend on whether the patient is hospitalized or treated as an outpatient. This decision is made based on the severity of the infection. The multiple therapeutic regimens used are all associated with clinical and microbiologic cure rates of greater than 90 percent [14,15]. A combination of Cefoxitin (2 g intravenously, every six hours) plus doxycycline (100 mg orally, every 12 hours) as used in this case is considered a unanimous recommendation.

Given the lack of response to the therapeutic regimen instituted with clinical deterioration, an exploratory laparoscopy, the gold standard imaging technique for diagnosing the syndrome, was decided [1]. Left salpingectomy and lysis of pelvic and hepatic adhesions were also performed.

Despite having an uneventful postoperative period, long-term complications such as chronic pelvic pain, infertility, or ectopic pregnancy are a possibility for this patient [16,17].

The FHCS is the rarest complication of DIP. Despite the extensive description of “violin string-like adhesions” in the literature, their photographic documentation is scarce. In addition to the rarity of the syndrome, it is generally managed with an antibiotic regimen, being currently more frequent in countries where health care is more deficient and where its approach by laparotomy makes it difficult to obtain images. The authors present a case with photographic documentation of the “violin string-like adhesions”, furthering medical literature.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

REFERENCES


