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REVIEW ARTICLE

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# Fitz-Hugh-Curtis Syndrome, A Underly Studied Complication in Pelvic Inflammatory Disease

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## ABSTRACT

**Introduction:** Fitz-Hugh-Curtis syndrome is a perihepatitis product of a complication of pelvic inflammatory disease, this entity mostly affects women of childbearing age, its main clinical manifestation is pain in the right upper quadrant that may or may not be associated with chronic pain in the pelvic region and a history of clinical or subclinical PID.

**Methodology:** For this article, a narrative review was carried out in different indexed journals and others, using keywords such as Fitz-Hugh-Curtis Syndrome, Pelvic Inflammatory Disease, in order to obtain original and review articles whose publication had been carried out between 2005 and 2020 Initially 28 articles were obtained but after applying our inclusion and exclusion criteria, we were left with 10 of which we collected the most applicable and relevant information possible.

**Results:** Fitz-Hugh-Curtis syndrome is a complication present in about 14% of patients diagnosed with PID. The way in which microorganisms spread from the upper genitalia to the hepatic level is through the movement of peritoneal fluids from the pariotocolic leak to the subphrenic space, but other routes of dissemination such as hematogenous and lymphatic have also been described.

**Conclution:** Despite having been described almost a century ago, it is little known within general practitioners and specialists, for which reason it is almost never seen in differential diagnoses, and the finding of its characteristic sign (adhesions on violin strings) ends up being incidental.

## ARTICLE HISTORY

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### Introduction

You can't mention Fitz-Hugh-Curtis syndrome (FHC) without first talking about pelvic inflammatory disease (PID). PID is a polymicrobial entity which occurs mainly in women of childbearing age and specifically affects the upper genital organs such as the cervix, uterus, fallopian tubes and ovary, thus causing the so-called cervicitis, endometritis, salpingitis and oophoritis respectively [1].

By the 1930s, this pathology was associated with a single microorganism, Neisseria Gonorrhoeae, but today it is known that there are multiple microorganisms capable of causing the disease, the main one being Chlamydia Trachomatis, although recent studies have shown that these two agents are isolated in less than 50% of cases. Among the other causative microorganisms are those that compromise the vaginal flora such as anaerobes, G. vaginalis, Haemophilus influenzae, Gram negative enteric bacilli and Streptococcus agalactiae [2].

### Materials and Methods

A narrative review was carried out, in which the databases of PubMed, Scielo and ScienceDirect, Google Scholar, among others, were searched. The collection and selection of articles was carried out in journals indexed in English and Spanish from 2005 to 2020. As keywords, the following terms were used in the databases according to the DeCS and MeSH methodology: Fitz-Hugh-Curtis Syndrome, Pelvic Inflammatory Disease. In this review, approximately 28 original and review publications related to the subject studied were identified, of which 10 articles met the inclusion requirements required by us, articles whose publication was between the period 2005-2020, which were articles of full text, which will present at least one of the aspects of the subject studied.

### Results

Fitz-Hugh-Curtis syndrome takes its name as such from the year

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1934 and was described for the first time as a peritonitis solely of gonococcal origin, something that we now completely refute [3, 4]. From that moment on, the condition begins to be part of the medical advice and to be described as perihepatitis, which manifests itself in two phases.

The first phase is the acute one in which an inflammation of the hepatic capsule, focal peritonitis, perihepatic exudate, subcapsular congestion and little local free fluid is generated locally, this secondary to an infection of the upper genital tract [5]. This condition at the extrapelvic level begins with the dissemination of germs facilitated by the movement of peritoneal fluids from the pariotocolic leak to the subphrenic space. the abdominopelvic organs [6].

The second phase of this process or chronic phase presents a characteristic sign at the liver level that confirms the diagnosis which is> violin string adhesions <photo 1>. These occur between the liver surface and the concomitant abdominal Wall [7].

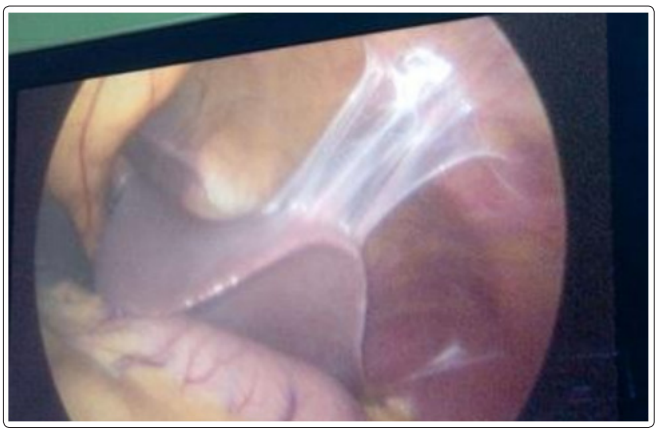

**Photo 1:** Adhesion in a violin string between the hepatic capsule and the abdominal wall

Fitz-Hugh-Curtis syndrome turns out to be a complication in 14% of patients diagnosed with PID, but it can also manifest as an atypical presentation in those patients with subclinical PID [8]. The clinical manifestations of this entity will be reflected in its chronic phase, then presenting symptoms such as non-acute abdominal pain in the right upper quadrant, a condition that is regularly confused with cholelithiasic pathology, but some paraclinical tests will be enough to rule it out. The chronicity of the condition and whether it is associated with chronic pelvic pain or a history of PID should be investigated in order to focus more on the diagnosis [9]. Adhesions in violin strings are a finding that confirms the diagnosis but is generally incidental within a routine complete revision in abdominal surgery, in case of visualizing these findings it would be prudent to perform a lysis with the prior consent of the patient and in relation to to the clinic, otherwise it must be noted in the surgical report [10].

**Conclusion**

- The FHC syndrome, although rare, should be within the differential diagnoses of all patients with pain in the right upper quadrant.
- Adhesions in violin strings between the liver and the abdominal wall make the definitive diagnosis of the syndrome.
- The FHC syndrome is not a new pathology, however the vast majority of doctors and specialists are not aware of it.
- FHC syndrome should be suspected even in cases where there is no known history of PID.

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