REVIEW ARTICLE Fitz–Hugh–Curtis Syndrome

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Abstract

Fitz–Hugh–Curtis syndrome (FHCS) is a rare disorder that occurs almost exclusively in women. It is characterized by inflammation of the membrane lining the stomach (peritoneum) and the tissues surrounding the liver (perihepatitis). The muscle that separates the stomach from the chest (diaphragm), which plays an essential role in breathing, may also be affected. The United States experiences 750,000 cases of pelvic inflammatory disease (PID) each year. Fitz–Hugh–Curtis syndrome is an uncommon manifestation of PID involving around 4% of adolescents. Common symptoms include severe pain in the upper right quadrant of the abdomen, fever, chills, headaches, and a general feeling of poor health (malaise). In some cases, antibiotic therapy may not provide relief of symptoms and a surgical procedure known as a laparotomy may be performed.

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INTRODUCTION

Fitz–Hugh–Curtis syndrome is a rare sign of PID, It is noticeable by inflammation of the pelvic organs. The formation of permeability in the liver capsule was first noticed by Thomas Fitz–Gerald, a health expert; Hugh Jr. and Arthur Hale Curtis, respectively, in 1930 and 1934.¹

In 1920, Stefano initially depicted the syndrome. In patients with atypical gallbladders, Curtis described adhesion between the anterior surface of the liver and the abdominal wall.² Similar patients with right upper quadrant abdominal pain were described by Fitz–Hugh Jr. in 1934. Peritonitis affecting the anterior surface and edge of the liver, as well as the adjacent peritoneal surface of the diaphragm, was discovered during laparotomy.³

Definition

Fitz–Hugh–Curtis syndrome is an uncommon ailment caused by enlargement of tissue generated by PID that surrounds the liver. Perihepatitis syndrome or gonococci perihepatitis are other names for the condition.⁴

The Epidemiological Characteristics of the Disease

It affects 4–14% of PID patients, which is a large number of women. The incidence is similar to PID in which it affects women of reproductive age and quite often younger people even if PID is still not present.⁵

The Causes of the Disease

Fitz–Hugh–Curtis syndrome is a rare form of PID that affects approximately 4% of teenagers. Chlamydia trachomatis, which causes chlamydia, or Neustria gonorrhea, which causes gonorrhea, causes it. Sexually transmitted infections (STDs), such as chlamydia and gonorrhea, are widespread. Fitz–Hugh–Curtis syndrome is caused by a variety of infections, the exact mechanism of which is unknown. Some experts believe that it is caused by bacteria travelling straight from the pelvis to the organ or through circulation or lymphatics to infect the liver and surrounding structures.²

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Pathophysiology

Fitz–Hugh–Curtis syndrome is a complication of PID, as described in the causes of microorganisms' transmission. Bacteria from the womb or genital area spread to the endometrial, reproductive organs, and intraperitoneal cavity in one of the following three ways:

- By voluntary rising transmission, bacteria from either the uterus or genital region spread to the endometrium, reproductive organs, and intraperitoneal cavity. Infection usually spreads to other organs. Effusion, vaginal sepsis, and abdominal peritonitis are all symptoms of uterine infections, and peritonitis is some of the complications.
- Pathogens could also travel through lymphoid systems, as in the case of a parametric disease caused by an oral contraceptive. Finally, nosocomial transmission, such as influenza, is a concern.^{6–9}

Symptoms

Acute, sharp pain in the upper part of the female reproductive system. Other regions of the body, like the right shoulder and inside the right arm, could be affected. Additional clinical signs that could include fever, chills, night sweats, vomiting, and nausea are all symptoms of a fever. Pelvic inflammatory illness is marked by migraines, hiccups, and fatigue, as well as vaginal discharge and

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abdominal discomfort. The lower abdominal pain can occur before, after, or concurrently with upper abdominal pain. $^{10}\,$

Diagnostic Procedure

X-rays, diagnostic laparoscopy, and certain laboratory tests are used to diagnose FHCS. Ultrasound, chest or stomach radiography, and computed tomography (CT) scans are all examples of X-ray examinations. X-rays are used to rule out other possible causes of perihepatic inflammation or to demonstrate the region's distinctive inflammation.¹¹

Diagnostic laparoscopy involves passing a short, thin tube through a small incision in the stomach into the abdominal cavity. The liver and surrounding tissues can be seen during a laparoscopic evaluation. The presence of adhesions between the diaphragm or liver and the front abdominal wall can be used to diagnose FHCS directly.¹²

A laboratory test can detect chlamydia trachomatis or Neisseria gonorrhea infection. A complete blood count (CBC) is used to determine whether or not you have leukocytosis. In the case of PID, blood cultures can vary and are usually negative.¹³

Differential Diagnosis

Fitz–Hugh–Curtis syndrome can look like a variety of other illnesses such as the following:

- Tubal pregnancy
- · Inflammation of the gallbladder
- Viral transmission
- Ureteric colic
- Kidney infection
- Deep vein thrombosis (pulmonary embolism)
- Appendix inflammation is just one of them.¹⁴

Management

- Antibiotic regimens can be customized for each patient depending on the level of suspicion. Ceftriaxone and azithromycin are routinely used to treat gonococci and chlamydia infections. Ceftriaxone, doxycycline, and metronidazole are now recommended treatments for complex PID.¹⁵
- In some circumstances, pain relievers (analgesics) such as acetaminophen and codeine may be utilized. In some situations, antibiotic medication may not be enough to relieve symptoms, and a surgical procedure called a laparotomy may be required.¹⁶

Complications

The pelvic inflammatory problems are a rare long-term consequence of FHCS as follows:

- Pain that persists
- Adhesion in the small intestine causes blockage
- Infertility.¹⁷

CONCLUSION

Fitz–Hugh–Curtis syndrome is a prevalent clinical condition that is linked to pertussis and PID. It must, however, be handled with extreme caution. Chlamydia trachomatis and Neisseria gonorrhea appear to be involved in the syndrome's etiology. Early treatment with antibiotics combined with laparoscopic lysis of adhesions can lead to the treatment of pelvic inflammatory illness, which is the cause of the syndrome's eruption. Abdominal infections, particularly those affecting the genital system, should be detected and treated as soon as possible.

REFERENCES

- 1. Shikino K, Ikusaka M. Fitz–Hugh–Curtis syndrome. BMJ Case Rep 2019;12(2):e229326. DOI: 10.1136/bcr-2019-229326.
- Khine H, Wren SB, Rotenberg O, Goldman DL. Fitz-Hugh-Curtis Syndrome in Adolescent Females: A Diagnostic Dilemma. Pediatr Emerg Care 2019;35(7):e121–e123. DOI: 10.1097/PEC.0000000000 01525.
- Kimball MW, Knee S. Gonococcal perihepatitis in a male. The Fitz–Hugh–Curtis syndrome. N Engl J Med 1970;282(19):1082–1084. DOI: 10.1056/NEJM197005072821908.
- Peter NG, Clark LR, Jaeger JR. Fitz-Hugh-Curtis syndrome: A diagnosis to consider in women with right upper quadrant pain. Cleve Clin J Med 2004;71:233–239. DOI: 10.3949/ccjm.71.3.233.
- Sonavane AD, Rathi PM. Fitz-Hugh-Curtis syndrome. Indian J Med Res 2017;145(1):147. DOI: 10.4103/ijmr.IJMR_1417_15.
- 6. Revzin MV, Mathur M, Dave HB, Macer ML, Spektor M. Pelvic inflammatory disease: Multimodality imaging approach with clinical-pathologic correlation. Radiographics. 2016;36(5):1579–1596. DOI: 10.1148/rg.2016150202.
- You JS, Kim MJ, Chung HS, Chung YE, Park I, Chung SP, et al. Clinical features of Fitz-Hugh-Curtis syndrome in the emergency department. Yonsei Med J 2012;53(4):753–758. DOI: 10.3349/ ymj.2012.53.4.753.
- Onoh RC, Mgbafuru CC, Onubuogu SE, Ugwuoke I. Fitz-Hugh-Curtis syndrome: An incidental diagnostic finding in an infertility workup. Niger J Clin Pract 2016;19(6):834–836. DOI: 10.4103/1119-3077.181357.
- 9. MacLean AB. Fitz-Hugh-Curtis syndrome. J Obstet Gynaecol 2008;28(3):259–260. DOI: 10.1080/01443610802042993.
- Stanley MM. Gonococcic peritonitis of the upper part of the abdomen in young women; (phrenic reaction, or subcostal syndrome of Stajano; Fitz-Hugh-Curtis syndrome); report of cases of three patients treated successfully with penicillin and a summary of the literature. Arch Internal Med 1946;78(1):1–3. DOI: 10.1001/ archinte.1946.00220010011001.
- 11. Pickhardt PJ, Fleishman MJ, Fisher AJ. Fitz–Hugh–Curtis syndrome: multidetector CT findings of transient hepatic attenuation difference and gallbladder wall thickening. Am J Roentgenol 2003;180:1605–1606. DOI: 10.2214/ajr.180.6.1801605.
- 12. Wu HM, Lee CL, Yen CF, Wang CJ, Soong YK. Laparoscopic diagnosis and management of Fitz–Hugh–Curtis syndrome: Report of three cases. Chang Gung Med J 2001;24:388–392. PMID: 11512371.
- Owens S, Yeko TR, Bloy R, Maroulis GB. Laparoscopic treatment of painful perihepatic adhesions in Fitz-Hugh-Curtis syndrome. Obstet Gynecol 1991;78(Suppl. 3 Pt 2):542–543. PMID: 1831253.
- 14. Piscaglia F, Vidili G, Ugolini G, et al. Fitz–Hugh–Curtis syndrome mimicking acute cholecystitis: value of new ultrasound findings in the differential diagnosis. Ultraschall Med 2005;26(3):227–230. DOI: 10.1055/s-2005-858170.
- 15. Kazama I, Nakajima T. A case of Fitz-Hugh-Curtis syndrome complicated by appendicitis conservatively treated with antibiotics. Clin Med Insights Case Rep 2013;6:35–40. DOI: 10.4137/ CCRep.S11522.
- Brun JL, Castan B, de Barbeyrac B, Cazanave C, Charvériat A, Faure K, et al. Pelvic inflammatory diseases: Updated guidelines for clinical practice – short version. Gynecol Obstet Fertil Senol 2019;47(5): 398–403. DOI: 10.1016/j.gofs.2019.03.012.
- Al-Ghassab RA, Tanveer S, Al-Lababidi NH, Zakaria HM, Al-Mulhim AA. Adhesive small bowel obstruction due to pelvic inflammatory disease: A case report. Saudi J Med Med Sci 2018;6(1):40–42. DOI: 10.4103/sjmms.sjmms_10_17.