https://doi.org/10.15218/zjms.2025.029

Fitz-Hugh-Curtis syndrome in male patients without history of sexually transmitted diseases

Received: 01/10/2023 Accepted: 14/12/2023

Saman Taher Barzinjy [1*]

Abstract

Background and objective: Fitz-Hugh-Curtis syndrome described as peri-hepatitis which is caused by pelvic inflammatory disease, typically seen among women who are in their reproductive years of life, the usual causative microorganisms are Chlamydia trachomatis and Neisseria gonorrhea, usually it will presented as right upper abdominal pain, it may be confused with biliary tract diseases.

Methods: Our case series reports were presented for the features of calculus cholecystitis between April 2018 and January 2021. A complete history was taken, a full physical examination was performed, relevant investigations were sent, incisions were made for the operations, and blood investigations were conducted after the operations to rule out the potential causes of perihepatitis.

Results: We reported three cases of Fitz-Hugh-Curtis syndrome in male patients at the ages of 51, 59 and 43 years, their findings discovered during operations of laparoscopic cholecystectomy for symptomatic gall bladder stones, past medical, past surgical and drug history of all three patients were negative and not significant even for gonococcal infections apart from hypertension of the first case and history of ERCP procedure for CBD stone extraction and obstructive jaundice for the second case, with hypothyroidism for the third case (he was on daily thyroxine 100 mg), all three patients underwent adhesiolysis of the bands and adhesions connecting the liver capsule with the anterior abdominal wall and diaphragm then the operations completed by laparoscopic cholecystectomy.

Conclusion: Fitz-Hugh-Curtis syndrome can be observed and diagnosed incidentally during laparoscopic procedures in male patients even without past history of gonococcal or other sexually transmitted diseases.

Keywords: Fitz-Hugh-Curtis syndrome; Male Fitz-Hugh-Curtis syndrome; Peri-hepatitis; Gonococcal peri-hepatitis.

Introduction

Fitz-Hugh-Curtis (FHC) syndrome is inflammation of the liver capsule without extension to the liver parenchyma in female patients of reproductive ages of life who have history of pelvic inflammatory disease (PID),[(1)] it's also called perihepatitis or gonococcal perihepatitis. In the 1930s, Curtisand Fitz-Hugh[(2)] reported a syndrome characterized by adhesions around the liver. Before 1970s, only Neisseria gonorrhea was considered as a causative bacterium of Fitz-Hugh-Curtis syndrome, while later on Wang PY, Zhang L, Wang X, Liu XJ, Chen L, Wang X, et al.[(3)] identified perihepatitis in a patient with an acute infectious disease using a laparoscope, suggesting Chlamydia trachomatis is a new causative micro-organism of Fitz-Hugh-Curtis syndrome in about 86-89% of cases. In literatures reported thereafter C. Trachomatis was identified in the cervix, ovarian tube, urine, and hepatic capsule of patients with this syndrome.[(4)] since the infection route of transmission is from the pelvis to the liver, transmission through the

[1] Department of Surgery, Faculty of General Medicine, Koya University, KOY45, Kurdistan Region, Iraq.
Correspondence: saman.taher@koyauniversity.org

https://doi.org/10.15218/zjms.2025.029

peritoneal cavity is considered a major way and there were reports that transmission may occurs through blood and through lymphatic vessels as well.[5]

Recently, diverse research has verified that arteriographic phase of dynamic abdominal computed tomography scan with the finding of perihepatic enhancement can be used for the diagnosis of Fitz-Hugh-Curtis syndrome.[5]

Fitz-Hugh-Curtis syndrome occurs in accompaniment with PID, and as such, mostly women will suffer and its incidence in men is extremely rare. Depending on researches performed, Kimbell and knee[6] reported Fitz-Hugh-Curtis syndrome in a man for the first time in 1970, other cases reported in 29 years old African American male patient by S Saurabh, E Unger, and C Pavlides.[7] in 2003 Sharma et al. divulgated three cases as a result of genital tuberculosis.[8] In 2010 diagnosis of a case of Fitz-Hugh-Curtis syndrome in a man of 35 years old has been observed in south Korea.[9]

Case studies

Case 1:

51 years old male patient consulted the out-patient department on April 2018 for the history of on and off right hypochondrial pain for about one year duration, the pain was radiating to the right shoulder area, aggravated by heavy and fatty meals and relieved only by spasmolytic analgesia he had no past history of any chronic medical or past surgical history apart from hypertension for about 4 years duration, he was on one antihypertensive drug; social and family history was not significant, past history of sexually transmitted diseases and sexual partner were not significant, he was married and has two sons and three daughters.

On examination, BMI: 31kg/$m^{2,}$ Bp:140/90 mmHg, PR:83bpm, RR:15 breaths /Min, body Temperature: 37c°, good conscious level, he was looking ill and he was in pain, abdominal examination revealed no significant findings apart from mild right upper abdominal tenderness. Investigations revealed no findings in CBC, LFT, RFT, RBS, virology screen, GUE, ECG, CXR and Echo cardiogram, abdominal ultrasound revealed multiple tiny gall bladder stones with features of chronic cholecystitis and mild degree fatty liver.

Depending on the mentioned history and examination with hematological and radiological results decision made for laparoscopic cholecystectomy. Intra operative findings were combined thin and thick adhesions (Figure 1) connecting the liver capsule with the anterior abdominal and diaphragm (Fitz-Hugh-Curtis syndrome), that made difficulties with the laparoscopic cholecystectomy and reaching the gall bladder, after adhesiolysis of the bands and adhesions (Figure 2) straight forward cholecystectomy performed, post operative period and follow up was smooth and the patient's complains completely disappeared, one week after the operation urine tests done for Neisseria gonorrhea and chlamydia trachomatis and the results was negative for IgG and IgM.

Case 2:

59 years old male patient consulted us at March 2019 for the history of sudden onset gradually increasing moderate upper abdominal pain for about 12 hours duration, the pain was radiating to the right shoulder area, aggravated by heavy and fatty meals and relieved only by spasmolytic analgesia, he had past history of the same attacks before 8 months with past history of ERCP for CBD stone extraction and obstructive jaundice before 2 months, social and family history was not significant, past history of sexually transmitted diseases and sexual partner were not significant, he was married and have four sons and two daughters.

On examination, BMI: 28kg/$m^{2,}$ Bp:120/90 mmHg, PR:77bpm, RR:13 breaths /Min, body temperature: 37c°, good conscious level, he was looking ill and he was in pain, abdominal examination revealed no

https://doi.org/10.15218/zjms.2025.029

significant findings apart from mild right upper abdominal tenderness. Investigations revealed no findings in CBC, LFT, RFT, RBS, virology screen, GUE, ECG, CXR and Echo cardiogram, abdominal ultrasound revealed two large gall bladder stones with features of acute cholecystitis, gall bladder wall thickness was 4 mm.

Depending on the mentioned history and examination with hematological and radiological results decision made for laparoscopic cholecystectomy on 12th March 2019. Intra operative findings were combined thin and thick adhesions connecting the liver capsule with the anterior abdominal and diaphragm (Fitz-Hugh-Curtis syndrome), (Figure 3 and 4), that made difficulties with the laparoscopic cholecystectomy and reaching the gall bladder, after adhesiolysis of the bands and adhesions, cholecystectomy performed for edematous and thick wall gall bladder (Figure 5) with its intra hepatic position, drain put, post operative period and follow up was smooth and the patient's complains completely disappeared, the drain removed at post operative day three, one week after the operation urine tests done for Neisseria gonorrhea and chlamydia trachomatis and the results was negative for IgG and IgM.

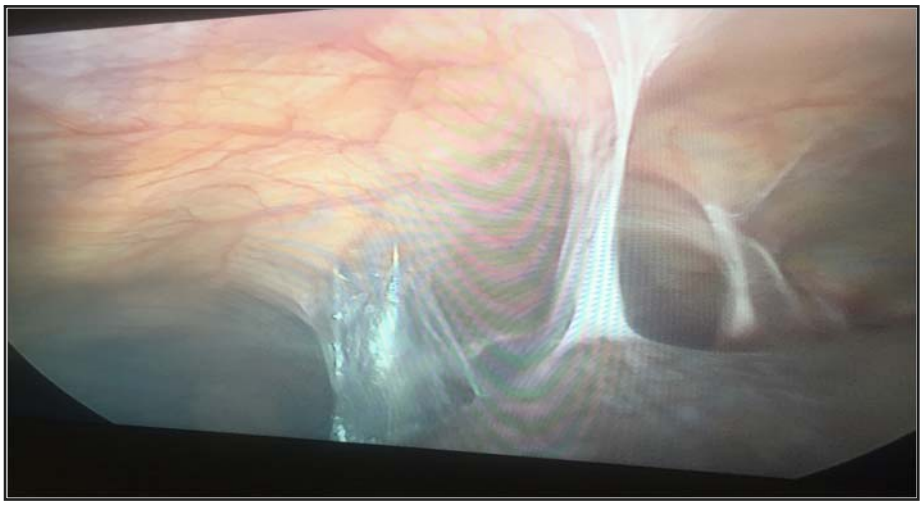


Figure 1 Intra-operative finding of 51 years old male

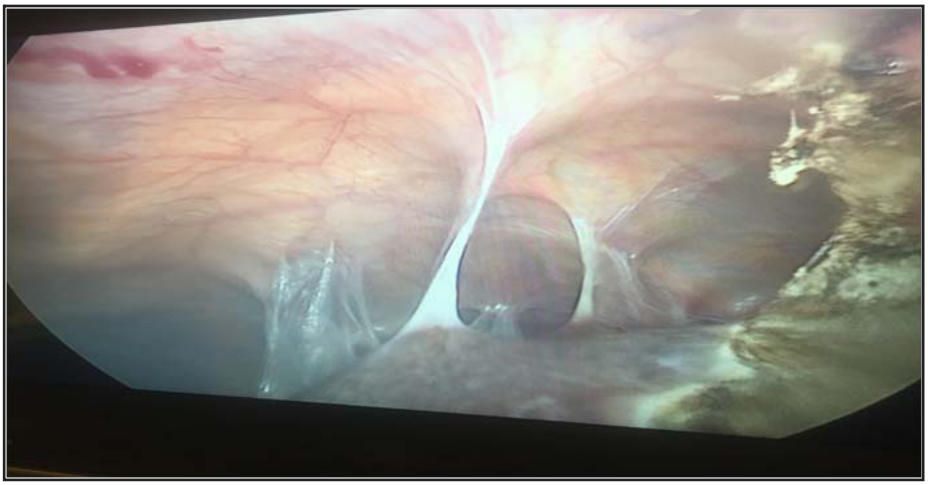
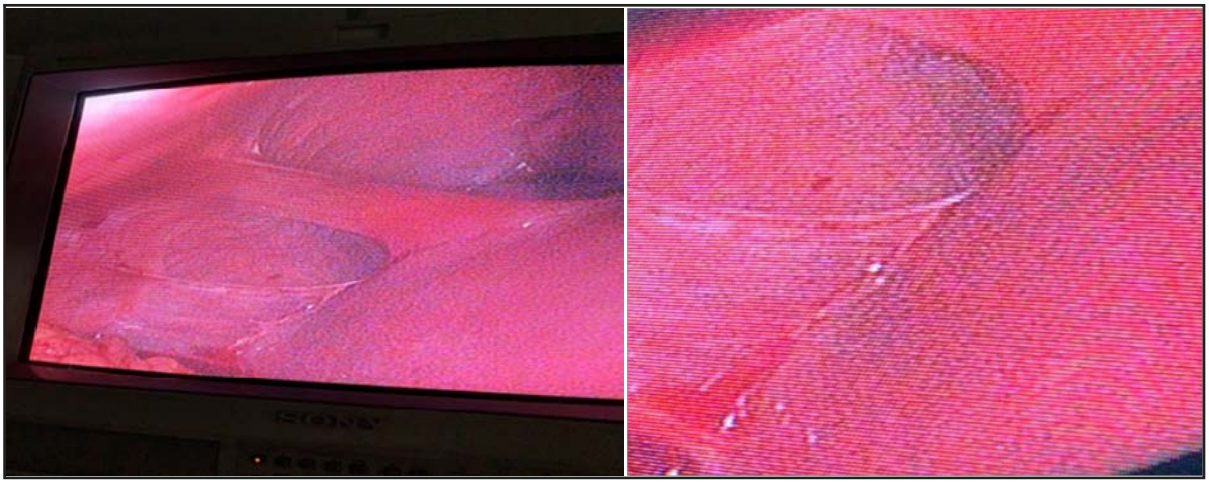


Figure 2 Intra-operative adhesiolysis of 51 years old male

https://doi.org/10.15218/zjms.2025.029



Figures 3,4 laparoscopic view of 59 years old man

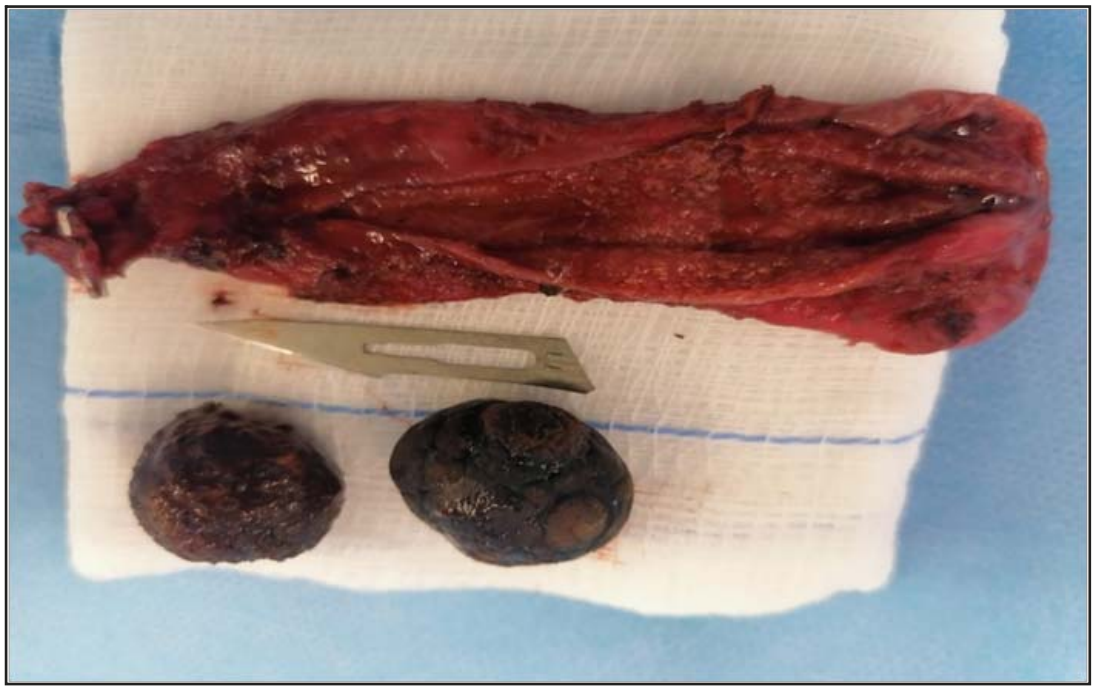


Figure 5 post-operative photo of the extracted specimen of 59 years old male patient

https://doi.org/10.15218/zjms.2025.029

Case 3:

43 years old male patient (Figure 6) visited the outpatient private clinic on January 2021 for the history of upper abdominal pain for about several months duration, the pain was radiating to the interscapular area, aggravated by heavy, spicy and fatty meals and relieved only by strong narcotic analgesia, he had no past history of any chronic medical or past surgical history apart from hypothyroidism for about 4 years duration, he was on thyroxine 100mg per day and well responded, social and family history was not significant, past history of sexually transmitted diseases and sexual partner were not significant, he was married and has two sons.

On examination, BMI: 33kg/$m^{2,}$ Bp:110/90 mmHg, PR:66bpm, RR:13 breaths /Min, body Temperature: 37.2c°, good conscious level, he was looking ill and he was in pain, abdominal examination revealed no significant findings apart from mild upper abdominal tenderness.

Investigations revealed no findings in CBC, LFT, TFT, RFT, RBS, virology screen, GUE, ECG, CXR and Echo cardiogram, apart from mild hyperlipidemia, abdominal ultrasound revealed multiple tiny gall bladder stones with features of acute calculus cholecystitis and 6 mm GB wall thickness.

Depending on the mentioned history and examination with hematological and radiological results decision made for emergency laparoscopic cholecystectomy on 27th January 2021. Intra operative (laparoscopic) findings were combined thin and thick adhesions (Figure 7) connecting the liver capsule with the anterior abdominal and diaphragm (Fitz-Hugh-Curtis syndrome), these adhesions were a cause of liver retraction toward the anterior abdominal wall that made difficulties with the laparoscopic cholecystectomy and reaching the gall bladder, after adhesiolysis of the bands and adhesions (Figure 7) straight forward cholecystectomy performed (Figure 8), post operative period and follow up was smooth and the patient's complains completely disappeared, 10 days after the operation urine tests done for Neisseria gonorrhea and chlamydia trachomatis and the results was negative for IgG and IgM.

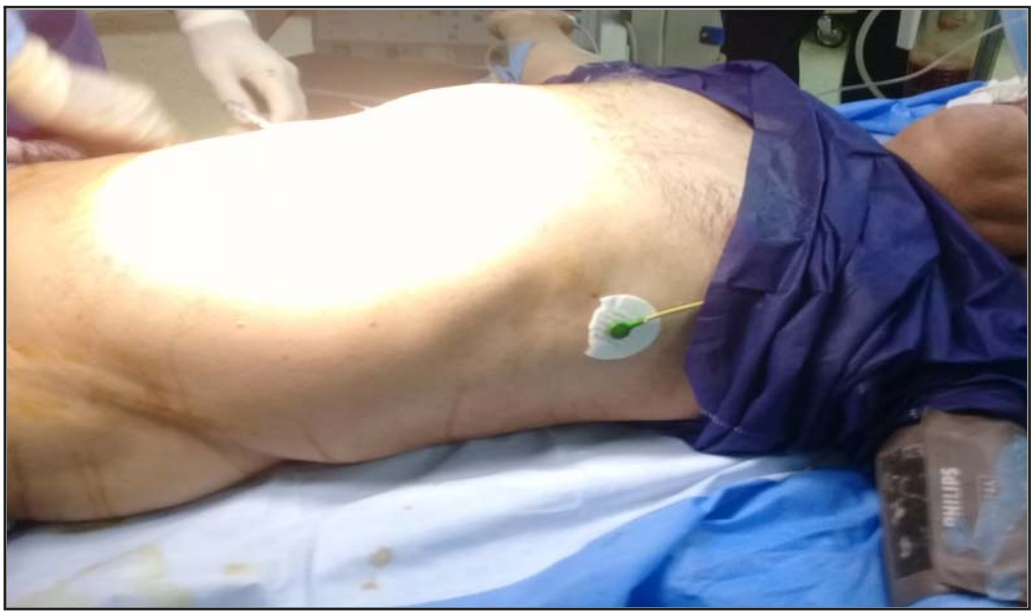


Figure 6 43 years old male patient before laparoscopic cholecystectomy for acute calculus cholecystitis

https://doi.org/10.15218/zjms.2025.029

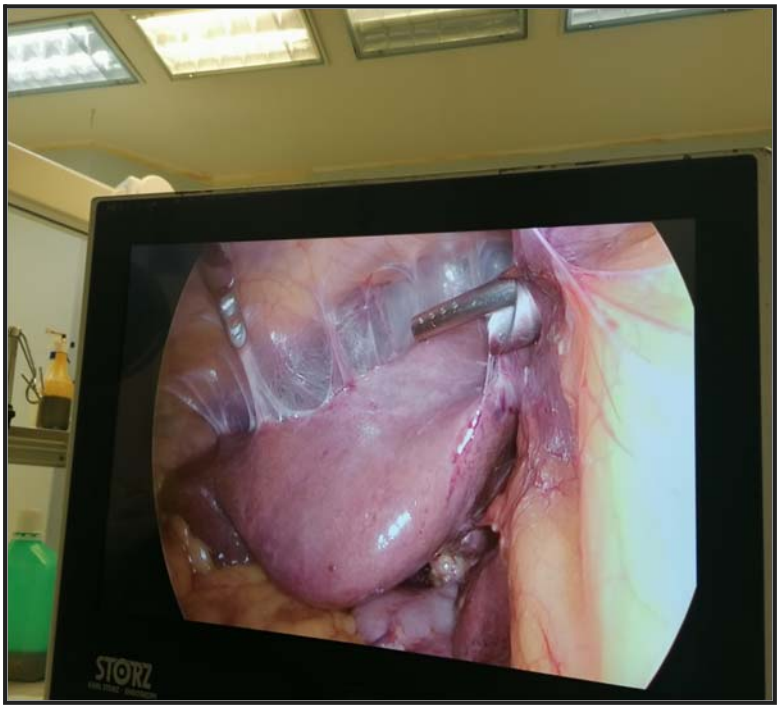


Figure 7 Intra operative (laparoscopic view) of 43 years old male patient

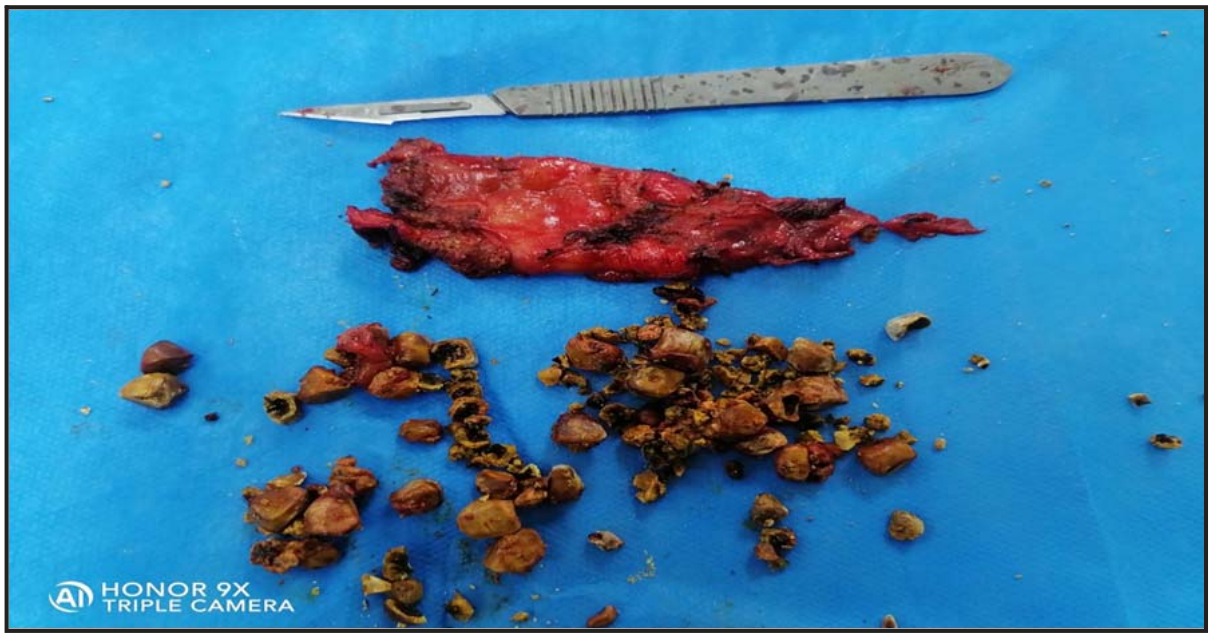


Figure 8 thick wall gall bladder with its content of multiple small gall stones after laparoscopic cholecystectomy

https://doi.org/10.15218/zjms.2025.029

Discussion

Fitz-Hugh-Curtis syndrome is perihepatitis accompanying women in their reproductive years of life suffered from PID.[10] it's major infection route is direct transmission from the inflammatory infections of the ovarian tube due to pelvic infection. Transmission through the lymphatic and blood vessels also may happen.[11] the most common causative micro-organisms are chlamydia trachomatis and Neisseria gonorrhea, which may be identified from uterine cervix, vagina and urine. In the past the diagnosis was confirmed by observing the pelvic inflammation and identification of the strains from violin string adhesions and adhered tissues between the liver capsule and the anterior abdominal wall with diaphragm as surgical method. However on consideration on the fact that is easily treated with appropriate antibiotics, Fitz-Hugh-Curtis syndrome can be diagnosed by dynamic abdominal CT arteriography after clinical and pathological tests including history taking and physical examination.[5] for the treatment for Fitz-Hugh-Curtis syndrome there is no standard antibiotic, but like most of other treatment of PID, appropriate antibiotic treatment is applied, oral antibiotics such as Tetracyclin, doxycycline, erythromycin, Ofloxacin, or azithromycin have been used against chlamydia trachomatis.[10]

In our cases there was no any past history or hematological findings of infectious diseases, all three cases diagnosed accidentally and intra operatively when surgical intervention done for symptomatic gall stone diseases and calculus cholecystitits, all of them treated surgically by adhesiolysis and cholecystectomy. Peri-hepatitis in our three cases had no any obvious risk factors as female in their reproductive years with history of PID, even they had no history of gonococcal or chlamydia infection.

Conclusion

Fitz-Hugh-Curtis syndrome could be diagnosed intra operatively and accidentally without previous history and without symptoms and during operation for unrelated diseases and procedures.

Fitz-Hugh-Curtis syndrome is very rare in male patients and exceedingly rare in those male patients who have no any previous history of infectious diseases, in review of literatures no cases of Fitz-Hugh-Curtis syndrome found in male patients accidentally and intra operatively for unrelated procedures. Apart from STD, Calculus cholecystitis can be one of the causes of FHC syndrome.

Our cases are the first three cases of Fitz-Hugh-Curtis syndrome reported in Iraq, as far as the first three cases recorded and reported in male patients without any history of sexually transmitted diseases.

Competing interests

The author declares that he has no competing interests.

References

1. Shikino K, Ikusaka M. Fitz-Hugh-Curtis syndrome. BMJ Case Rep. 2019;12(2). [PMC free article] [PubMed] doi: 10.1136/bcr-2019-229326
2. Khine H, Wren SB, Rotenberg O, Goldman DL. Fitz-Hugh-Curtis Syndrome in Adolescent Females: A Diagnostic Dilemma. Pediatr Emerg Care. 2019; 35(7):e121-3. [PubMed]
3. Wang PY, Zhang L, Wang X, Liu XJ, Chen L, Wang X, et al. Fitz-Hugh-Curtis syndrome: clinical diagnostic value of dynamic enhanced MSCT. J Phys Ther Sci. 2015; 27:1641–4. [PMC free article] [PubMed] [Google Scholar]
4. Nwanbong E, Dingum A. Acute pelvic inflammatory disease in Cameroon. A cross sectional Descriptive study. Afr. J Reprod Health. 2015; 19(4):87. [Google Scholar]
5. Nishie A, Yoshimitsuk, Irie H, presentation of Fitz-Hugh-Curtis syndrome radiologic manifestation. J comput Assist Tomogr. 2003; 27:786-91.
6. Kimball MW, Knee S.Gocnoccal perihepatitis in a male. The Fitz-Hugh-Curtis syndrome N Engl J Med. 1970; 282:1082-4. doi: 10.1056/NEJM197005072821908
7. Saurabh S, Unger E, Pavlide C, Fitz – Hugh – Curtis syndrome in a male patient, Journal of Surgical Case Reports. 2012; 2012(3):12. doi: 10.1093/jscr/2012.3.12
8. Sharma JB, Malhotra M, Arora R. Fitz–Hugh–Curtis syndrome as a result of genital tuberculosis: a report of three cases. Acta Obstet

Gynecol Scand. 2003; 82(3):295–7. doi: 10.1080/j.1600-0412.2003.820302.x
9. Baek HC, Bae YS, Lee KJ, Kim DH, Bae SH, Kim DW, et al. [A case of Fitz-Hugh-Curtis syndrome in a male. Korean J Gastroenterol. 2010; 55:203–7. [PubMed] [Google Scholar].
10. Kechagia N. Bersimis S. chatzipanagioton S. incedience and antimicrobial susceptibilities of genital mycoplasmas in out-patient women with clinical vaginitis in Athens, Greece. J Antimicrob Chemother. 2008; 62:122-5. doi: 10.1093/jac/dkn158
11. Theofanakis CP, Kyriakidis AV. Fitz-Hugh–Curtis syndrome. Gynecol Surg. 2011; 8(2):129–34.