Fitz-Hugh Curtis Syndrome

Synonyms: Fitz-Hugh and Curtis syndrome, FHC syndrome, Curtis-Fitz-Hugh syndrome

Fitz-Hugh Curtis syndrome is a type of perihepatitis that causes liver capsular infection without infecting the hepatic parenchyma or pelvis. Fitz-Hugh Curtis syndrome consists of right upper quadrant pain following the transabdominal spread of infection from pelvic inflammatory disease (PID). During the chronic phase, adhesions form between the anterior liver capsule and the anterior abdominal wall or diaphragm and they are classically described as like a 'violin string'.

Epidemiology

- It affects between 4-14% of women who have PID.
- The epidemiology tends to mimic that of PID, affecting women of reproductive age and often younger women.
- However, the condition has been reported in the absence of PID. [1]
- It has also rarely been reported in male patients. [2,3]

Aetiology [1]

- Initially, only Neisseria gonorrhoeae was considered a causative bacterium.
- However, in recent years, additional causative bacteria such as Chlamydia trachomatis have been reported.
- This condition has also been found to be caused by other bacterial sexually transmitted infections.
- Genital tuberculosis and appendicitis can also be associated. [4]
- The spread of disease from the pelvis to the liver may be due to circulation of fluid along the paracolic gutter; it may be due to lymphatic drainage or it may be via the bloodstream.

Presentation

There is both an acute and a chronic phase. In the acute phase the following features are often found:

- Acute onset of severe, sharp pain in the right upper quadrant and especially over the area of the gallbladder.
- Pain which may be referred to the right shoulder.
- Pain which is pleuritic in nature and anything that increases intra-abdominal pressure, such as a cough, sneeze or movement, is associated with a sharp aggravation of the pain.
- There may possibly be:
  - Nausea
  - Vomiting
  - Hiccups
  - Chills
  - Fever
  - Night sweats
  - Headaches
  - General malaise

- There are often features of acute salpingitis but this is not invariable.

The chronic phase may show persistent, dull pain in the right upper quadrant or the pain may subside.
Examination
- There may be typical features of PID with lower abdominal tenderness, cervical excitation pain and tender adnexa.
- Auscultation over the anterior costal margin may show a friction rub described as *walking in new snow*. This is similar to the sound of acute pericarditis.
- There may be no abnormalities on examination.

Differential diagnosis
The differential diagnosis includes that for *pelvic pain* and *right upper quadrant pain*. The presentation of this disease may mimic a number of others.\[^5\]

The most important include:
- Ectopic pregnancy
- Pyelonephritis
- Cholecystitis
- Viral hepatitis
- Pulmonary embolism
- Renal colic
- Appendicitis
- Pleurisy

Often it is a diagnosis of exclusion.

Investigations
- Swabs should be taken for gonorrhoea and chlamydia. See also separate *Chlamydial Genital Infection* article.
- FBC may show an elevated white count and erythrocyte sedimentation rate (ESR) may be raised.
- LFTs should be normal, as the parenchyma of the liver is not involved.
- Microscopy and culture of urine.
- Abdominal ultrasound to exclude renal or biliary stones. Diagnosis by ultrasound showing the ‘violin string’ and ascites has been reported.
- Enhanced multislice CT can also be of value.\[^5\]
- A dynamic abdominal CT, including an arterial phase scan, can significantly improve the depiction of perihepatic enhancement.\[^6\]
- CXR may be helpful to exclude pneumonia, pulmonary embolism and air under the diaphragm.
- A definitive diagnosis can be made based on detection of violin string-like adhesions or identification of causative organisms in hepatic capsular lesion specimens, which requires laparoscopy or laparotomy.\[^8\]
- In the chronic phase, the classical ‘violin-string’ adhesions of the anterior liver capsule to the anterior abdominal wall or diaphragm may be seen.

Management
- Appropriate antibiotics of appropriate duration to treat the PID. This may depend on the results of culture. See also separate *Pelvic Inflammatory Disease* article.
- Empirical treatment is usually recommended for sexually active women, unless another cause for the clinical signs can be identified.
- Analgesia may be required.
- It may be possible to divide some adhesions at laparoscopy.

*When treating PID, remember to treat not just the patient but the sexual partner(s) too.*
Complications[1]

Long-term complications of Fitz-Hugh Curtis syndrome are rare and include:

- Pelvic inflammatory complications.
- Chronic pain.
- Small intestinal obstruction due to adhesion.
- Infertility.

Prognosis

- Prognosis is generally as for PID.[6]
- There may be no symptoms of Fitz-Hugh Curtis syndrome and it is found incidentally at operation at a later date.
- It may also be found as an incidental finding when investigating infertility and, as such, it may also indicate tubal damage.

Prevention

Prevention is as for PID.

Historical aspects

Fitz-Hugh and Curtis were not the first to describe the condition. In 1920 it was described by Stajano from Uruguay in an article in Spanish. Thomas Fitz-Hugh Jr (1894-1963) was born in Maryland. Arthur H. Curtis was born in 1881 and died in 1955. The two eponymous doctors do not seem ever to have worked together and their papers were published independently.

Further reading & references


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