SMGroup

SM Journal of Gynecology and Obstetrics

Case Report

Febrile Abdominal Pains after Removal of Intrauterine Device!

Moukit M[1]*, El-Hassani M[1], Kouach J[1,2], Moussaoui Rahali D[1,2] and Dehayni M[1,2,3]

[1]*Department of obstetrics and gynecology, Military Training Hospital Mohamed-V, Morocco*
[2]*Faculty of Medicine and Pharmacy, University Mohammed-V, Morocco*
[3]*Pole of visceral surgery and obstetrics gynecology, Morroco*

Article Information

Received date: Sep 14, 2016
Accepted date: Oct 24, 2016
Published date: Oct 31, 2016

***Corresponding author**

Mounir Moukit, Department of obstetrics and gynecology, Military Training Hospital Mohamed-V, avenue of FAR, Hay Riyad, 10100, Rabat, Morocco, Tel: 00212 630957696; Email: moukitmounir@yahoo.com

Keywords Febrile abdominal pains; Intrauterine device; Escherichia coli; Pelvic inflammatory disease; Tubo-ovarian abscess; Fitz Hugh and Curtis syndrome

Abstract

Febrile abdominal pains in a patient with risk factors for pelvic inflammatory disease should alert clinicians to the possibility that the disease could evolve unfavorably toward the formation of a tubo-ovarian abscess, an entity that puts the patient's life at risk. We present a case of severe form of pelvic inflammatory disease complicated by perihepatitis in a 26-year-old female having history of intrauterine device removed two months ago. Its rapid diagnosis and treatment can avoid long term complications.

Introduction

Pelvic Inflammatory Disease (PID) is a common infection and consists of inflammation of the upper female genital tract caused by ascending infection from the vaginal flora including the sexually transmitted organisms (Neisseria gonorrhoeae and Chlamydia trachomatis), and it frequently leads to serious consequences including Tubo-Ovarian Abscess (TOA) and Fitz Hugh Curtis Syndrome (FHCS) [1]. This association is rarely described in the literature. To illustrate the pathogenesis, diagnosis and management of this severe form of pelvic inflammatory disease, a case of 26 years old woman is presented.

Case report

A 26 year's old woman, admitted in the gynecological emergencies for a 3week's history of abdominal pain starting in the lower abdomen after removal of Intrauterine Device (IUD) two months ago for abnormal uterine bleeding. The pain had become generalized, with fever, but was most severe in the hypogastric area. Last menstrual period was reported as one weeks prior. Physical examination objectified 39°C of fever, pelvic tenderness extended to the right upper quadrant with a positive murphy sign and malodorous vaginal discharge with right adnexal masses. Laboratory data showed elevated leukocyte count (21,000cells/ml) and C reactive protein (123mg/l). Plasmatic BHCG was negative. The pelvic ultrasonography showed right latero-uterine masses with a minimal peritoneal fluid collection. A contrast-enhanced Computed Tomography (CT) scan of the abdomen and pelvis was obtained (Figure 1); the description of the lesion was in favor of right TOA. The liver and gallbladder were normal and the patient was consented for an exploratory laparoscopy. Preoperatively cefotetan (2g q12h) and Doxycycline (100mg q12h) were given intravenously (IV). Intraoperative laparoscopic findings revealed right tubo-ovarian abscesses with dense adhesion in her pelvic cavity including the uterus, fallopian tubes, and ovaries. The perihepatic area showed the "violin-string" like fibrous adhesions between the liver and anterior peritoneum (Figure 2). Under the diagnosis of severe form of PID complicated by FHCS, she underwent a right adnexectomy,

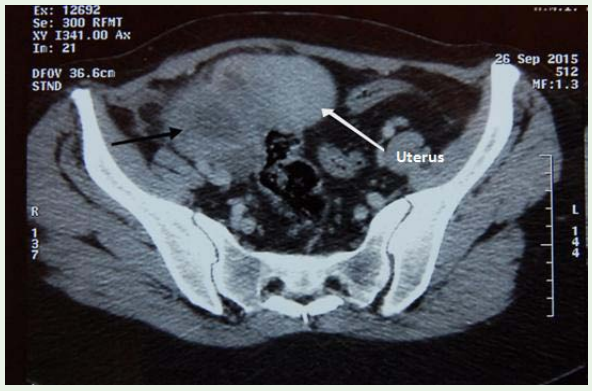

Figure 1: contrast-enhanced CT scan of pelvis: 6cm right mass (black arrow) with thick liquid content and a wall enhanced after injection of a contrast agent.

How to cite this article Moukit M, El-Hassani M, Kouach J, Moussaoui Rahali D and Dehayni M. Febrile Abdominal Pains after Removal of Intrauterine Device!. SM J Gynecol Obstet. 2016; 2(1): 1014.

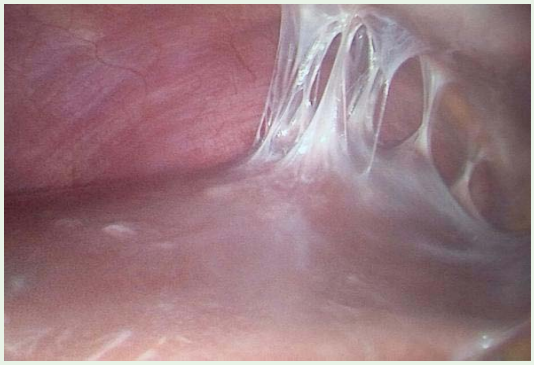

Figure 2: Per laparoscopic view: violin-string like fibrous adhesions between the liver and anterior peritoneum.

appendectomy, adhesiolysis and irrigation of the pelvic cavity. The TOA cultures grew Cefotetan and Doxycycline sensitive Escherichia Coli (E.Coli) and were prescribed for a total of 14 days PO. Short-term recovery was satisfactory.

Discussion

A tubo-ovarian abscess represents the most severe form of PID, predominantly caused by a polymicrobial upper genital tract Infection [2]. Approximately 30% of patients with PID develop this complication, usually in women aged between 15 and 40 years [3]. The consequences of this disease can be fatal (rupture of the abscess), with high prevalence of long-term sequelae including infertility, ectopic pregnancy and chronic pelvic pain [4]. The use of an IUD has frequently been implicated in the development of both PID and TOA. Several investigators have reported adirect relation-ship between IUD usage and TOAs. In a 1977 study, Golde and colleagues reported that among 85 patients with surgically proven TOA, 32 (37%) were IUD users [5]. In another retrospective analysis, 160 women with TOAs had a 47% incidence of IUD use [6]. This chronic inflammatory state within the uterus theoretically could predispose to progressive endometritis, peritonitis and the formation of abscess cavities [7,8]. When specific cultures are obtained, the purest isolates are generally anaerobic organisms. The most frequent isolates from these abscesses include a great variety of the Enterobacteriaciae such as E. coli (37%), B. fragilis (22%), other Bacteroides species (26%), Peptostreptococci (18%), and Peptococci (11%) [3,9]. Although Neisseria Gonorrhea (NG) and Chlamydia Trachomatis (CT) are considered major pathogens in the development of PID and TOAs, these organisms are rarely obtained at culture [3,10]. The symptoms of TOA are often poor and not specific. Patients classically present with fever, pelvic pain and a pelvic mass. In a large series of patients with ultra-sonographically or surgically confirmed TOA found that 60% had a temperature higher than 37.8°C, 26% had nausea and 19% had chronic abdomino-pelvic pain [11]. In laboratory studies, we found elevated white blood cell count (66%-80% of cases), erythrocyte sedimentation rate and C reactive protein [12]. However, the absence of one, both or all of these biological signs should not exclude the diagnosis. The appearance of a TOA on ultrasound may appear as a complex cystic adnexal mass containing multiple septations and internal echoes. In a study by Bulas and associates, pelvic ultrasound correctly identified TOAs in 93.6% of patients who had a surgically confirmed TOA [13]. The size of the TOA may also be followed sonographically as an indication of therapeutic response [12]. CT of the pelvis and abdomen may aid in the diagnosis, determine the planes between the mass and other adjacent structures and may additionally be used to aid in the percutaneous drainage of the abscess [14,15,16]. These abscesses appear as a low attenuation septated tubular masses with a uniform wall thickness [14,15,17]. Magnetic resonance imaging may be beneficial in identifying an abscess when ultrasound and CT scans have not provided adequate localization of the lesion in the abdomen. The association TOA and FHCS in PID is rarely describe in the literature. However, the incidence of FHCS ranges from 4% to 14% in women with PID, but can be as high as 27% in adolescents with PID, whose immature genitourinary tract anatomy predisposes them to ascending infection [18]. It may be suspected in sexually active young women with severe right upper quadrant abdominal pain, when emergency sonography reveals an intact gallbladder and no demonstrable abnormal lesion in the abdomen. In the last several decades, the confirmative diagnosis of FHCS has been the demonstration of a typical "violin-string appearance" in laparatomy or laparascopical examination. However, recent papers have been based on the noninvasive modalities of imaging findings (hepatic capsular enhancement on the arterial-phase CT), and immune serologic tests [19,20]. In our patient, the normal appearance of the hepatic capsule probably was related to delayed phase consultation. The "gold standard" for the diagnosis of TOAs and FHCS is laparoscopy, it provides direct visual inspection of pelvic and abdominal organs and access to the adnexa for possible drainage and culture of the abscesses [21,22]. Surgical exploration on initial evaluation is indicated in the setting of an acute abdomen and signs of sepsis or hemodynamic instability, particularly if a ruptured TOA is suspected. In our case, the patient underwent an exploratory laparoscopy because of her symptoms (acute pain) and the size of TOA in radiological exploration (6cm). Antibiotic therapy has shown to be effective in multiple clinical studies to treat abscesses of various sizes and FHCS in PID. The treatment of choice includes parenteral administration of a third-generation cephalosporin and Doxycycline, with or without metronidazole. Alternatively, clindamycin can be combined with an aminoglycoside, because they are broad-spectrum and, most important, cover sexually transmitted organisms (NG and CT) [23,24]. However, when no clinical improvement is noted within 72hours of antibiotic initiation, laparoscopic lysis of the adhesions with drainage of the abscess has proven beneficial [11,22].

Conclusion

The high percentage of patients with TOAs and IUD should alert the practitioner to signs of PID in IUD users and administer appropriate antibiotics and removal of the IUD. FHC syndrome should be suspected when a right upper quadrant pain is associate. The therapeutic strategies including the prescription of a more aggressive antibiotic regimen and early drainage of the abscess.

References

1. Caroline M, Malavika P. Pelvic inflammatory disease: current concepts in pathogenesis, diagnosis and treatment. Infect Dis Clin N Am. 2013; 27: 793-809.

2. Hartmann K, Lerand SJ, Jay MS. Tubo-ovarian abscess in virginal adolescents: exposure of the underlying etiology. J Pediatr Adolesc Gynecol. 2009; 22: 13-16.

3. Wiesenfeld HC, Sweet RL. Progress in the management of tuboovarian abscesses. Clin Obstet Gynecol. 1993; 36: 433-444.

4. McWilliams GD, Hill MJ, Dietrich CS 3rd. Gynecologic emergencies. Surg Clin North Am. 2008; 88: 265-283.

5. Golde SH, Israel R, Ledger WJ. Unilateral tubo-ovarian abscess: A distinct entity. Am J Obstet Gynecol. 1977; 127: 807-810.

6. Ginsburg DS, Stern JL, Hamod KA, Rene G, Michael RS. Tubo-ovarian abscess: A retrospective review. Am J Obstet Gynecol.1980; 138: 1055-1058.

7. Burnhill MS. Syndrome of progressive endometritis associated with intrauterine contraceptive devices. Adv Planned Parent. 1972; 8: 144-150.

8. Burkman R, Schlesselman S, McCaffrey L, Gupta PK, Spence M. The relationship of genital tract actinomycetes and the development of pelvic inflammatory disease. Am JObstet Gynecol. 1982; 143: 585-589.

9. Walker CE, Landers DV. Pelvic abscesses: New trends in the management of tuboovarian abscesses. Obstet Gynecol Survey. 1991; 46: 615-624.

10. Soper DE. Pelvic inflammatory disease. Infect Dis Clin N Am. 1994; 8: 821-840.

11. Landers DV, Sweet RL. Tubo-ovarian abscess: contemporary approach to management. Rev Infect Dis. 1983; 5: 876-884.

12. Thomas CK, Christie C, Anthony P. Tubo-Ovarian Abscess: Diagnosis, Medical and Surgical Management. Compr Ther. 2004; 30: 93-100.

13. Bulas DI, Ahlstrom PA, Sivit CT, Blask A R, O'Donnell R M. Pelvic inflammatory disease in the adolescent: Comparison of transabdominal and transvaginal sonographic evaluation. Radiology. 1992; 183: 435-439.

14. Ellis JH, Francis IR, Rhodes M, Naomi M, Fechner K. CT findings in tubo-ovarian abscess. J Comput Tomography. 1991; 15: 589-592.

15. Fabiszewski NL, Sumkin JH, Johns CM. Contemporary radiological percutaneous abscess drainage in the pelvis. Clin Obstet Gynecol. 1993; 36: 445-456.

16. Outwater EK, Dunton CJ. Imaging of the ovary and the adnexa: Clinical issues and applications of MR imaging. Radiology. 1995; 194: 1-18.

17. Tyrrell RT, Murphy FB, Bernadino ME. Tubo-ovarian abscesses: CT guided percutaneous drainage. Radiology. 1990; 175: 87-89.

18. Peter NG, Clark LR, Jaeger JR. Fitz-Hugh-Curtis syndrome: a diag-nosis to consider in women with right upper quadrant pain. Cleve Clin J Med 2004; 71: 233-239.

19. Nishie A, Yoshimitsu K, Irie H, Yoshitake T, Aibe H, Tajima T, et al. Fitz-Hugh-Curtis syndrome. Radiologic manifestation. J Comput Assist Tomogr. 2003; 27: 786-791.

20. Tsubuku M, Hayashi S, Terahara A, Furukawa T, Ohmura G. Fitz-Hugh-Curtis syndrome: linear contrast enhancement of the surface of the liver on CT. J Comput Assist Tomogr. 2002; 26: 456-458.

21. Henry Suchet J, Soler A, Loffredo V. Laparoscopic treatment of tubo-ovarian abscess. J Reprod Med. 1984; 29: 579-582.

22. Counselman F. An unusual presentation of FHC syndrome. The journal of emergency medicine. 1994; 12: 167-170.

23. Public Health Agency of Canada: Management and treatment of specific syndromes, pelvic inflammatory disease. In: Canadian Guidelines on Sexually Transmitted Infections. Canada, T Wong. 2010; 1-9.

24. Pelvic Inflammatory Disease. MMWR Recomm Rep. 2010; 59: 1-110.