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Case report

Diffuse intraabdominal infection due to septic abortion but mimicking acute appendicitis

A. Goker*, K. Sarsmaz, L. Dinçer, S. Tarhan, N.K. Kuscu
Celal Bayar University, Turkey.

*Corresponding author; Asli Goker, Celal Bayar University, Turkey.

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ABSTRACT

We present a case of diffuse intraabdominal infection which was misdiagnosed as appendicitis. The patient concealed having had sexual intercourse and being pregnant. She was diagnosed as intraabdominal infection after acute abdomen developed and a diagnostic laparotomy was performed. The clinical state was complicated by pleural effusion and subsplenic abcess formation. After a long period of antibiotherapy and drainage of the abcess, the patient was able to be discharged. The case represents the importance of correct anamnesis, choosing appropriate diagnostic tools, performing timely surgery and close follow up. All women in the reproductive age should be thoroughly questioned about sexual activity and the possibility of a septic abortion must be kept in mind in single females.

1. Introduction

The World Health Organization defines unsafe abortion as “a procedure for terminating an unintended pregnancy either by people lacking the necessary professional skills or in an environment lacking the minimal medical standards, or both" (WHO, 1993). Unsafe or septic abortions are more frequent in low income countries with poor health care facilities. A female patient applying to the hospital for abdominal pain is routinely examined and questioned about her last menstrual period. However, sometimes the emergency department is reluctant in having a pregnancy test done in case of a woman who is single. This may lead to delay in diagnosis and

dissemination of the infection causing misinterpretation of the symptoms. Other causes of acute abdomen may mask the underlying condition.

2. Case

A 20 year old single woman applied to the emergency department with complaints of nausea, vomiting and abdominal pain. She had a history of Insulin Dependent Diabetes Mellitus and tobacco use. She had abdominal pain for the past three days and reported her last menstrual period as 1 week ago. Her vital signs were stable with arterial pressure and pulse within normal range.

On physical examination the patient had abdominal tenderness. An abdominal ultrasonography was performed due to her declaration of being a virgin and diffuse abdominal fluid was visualised. The endometrium was measured as 22 mm and near the cervix there was a hipoechoic lesion interpreted as gestational sac with no fetal component in it. Serum levels of β-HCG, hemogram, hematocrit and white blood cells were measured as 5092 mIU/mL, 12.6 g/dL, 32.4% and 20,4200/u/L, respectively. The patient was diagnosed as ectopic pregnancy and hospitalised. Upon questioning the patient admitted to have had sexual intercourse and vaginal examination was performed. Exutero bleeding was encountered. A body temperature of 39^{o} C was measured and tachycardia of 130 beats/min evolved. A repeat ultrasonography revealed a 40x22 mm sized lesion in Douglas pouch. Antiobiotherapy was commenced and blood culture test was done. Her vital signs and blood counts remained stable with mild tachycardia and hypotension, however her abdominal tenderness increased, distension and defence also evolved. After consultation with the department of general surgery a diagnostic laparatomy was indicated. The preoperative diagnosis was ruptured ectopic pregnancy, ruptured appendicitis and tuboovarian abcess. Informed consent was obtained from the patient.

Under general anesthesia a midline incision was performed. The abdominal cavity was filled with pus, the uterine serosa, both ovaries and the intestines were covered with exudate and bilateral inflamed hydrosalpinx was observed. Bowel loops were examined and no infectious focus was identified. The appendix was also intact. The abdominal cavity, the paracolic, parahepatic and parasplenic areas were washed with saline. Dilatation and curettage was perfomed. Broad spectrum antibiotherapy was begun and the patient was observed at the intensive care unit for 1 week.

In the postoperative period the patient had high body temperatures, leucoytosis rising up to 39,750 /uL, sedimentation rate of 104 mm/hr and CRP of 187 mg/L. Her blood, incision site and urine cultures were negative. She complained of shortness of breath. Thorax CT and abdominal CT were performed and the results showed pleural effusion and fluid collection in the subcapsular area of the spleen. Thoracentesis was performed and antibiotics were changed to broader spectrum. Microbiologic investigation of the pleural fluid was negative. Drainage of the subsplenic collection was performed by the Radiology Department and was found to be negative for bacteria and mycobacteria nucleic acid.

On postoperative 28^{th} day the patient was stable with normal blood parameters, vital signs, oral nourishment, defecation and micturition. She was externalized with oral antibiotherapy.

3. Discussion

It is estimated that 14 unsafe abortions per 1000 women ocur annually all over the world and complications including death evolve in nearly half of these (WHO, 1993). The most frequent complications of septic abortion are anemia, hemorrhages, sepsis and maternal death (Sule-Odu and Olatunji, 2002). Septic abortion is not frequent in the western world where contraceptive methods are easily obtained, sexual education is given in school and abortion is legally performed under adequate conditions. However, in some countries illegal abortion is a major cause for maternal death such as Brazil, Latin America and Nigeria (Sule-Odu and Olatunji, 2002; Fusco and Silva, 2012). Incomplete induced abortion may cause retained products and septic procedures may spread infections into the abdominal cavity leading to intraabdominal infection and/or sepsis as presented in this case.

There is limited knowledge about septic abortions in Turkey. According to the data of the National Population Study, elective abortion rate was 0,29/1000 pregnancies in 2008 (TPHSC, 2008). It is legal in our country to terminate pregnancies before ten weeks of gestation (Turkish Law number, 1983) Contraceptive methods are freely sold and primary health care centers educate women and men about family planning. These are the main reasons why septic abortion is a rare entity.

The reported patient was misdiagnosed as appendicitis. Her anamnesis was misleading. Due to the Turkish social structure single females are not expected to be sexually active, therefore the initial evaluation of the patient was indefinitive. It is important to question about the last menstrual period and to have a pregnancy test done in case of suspected pregnancy and to rule out ectopic pregnancy.

Differential diagnosis of abdominal pain in a woman includes ectopic pregnancy, acute appendicitis, adnexal torsion, pelvic inflammatory disease and all other causes related to the abdomen. Free fluid on ultrasound imaging is suggestive of intraabdominal bleeding or infection. It is not always easy to differentiate appendicitis from genitourinary tract disorders or ectopic pregnancy. Misdiagnosis in these patients may lead to perforation or plastron formation in case of appendicitis.

Pelvic inflammatory disease, cholera, acute appendicitis, typhoid enteritis, incomplete septic abortion, uterine fibroid with menorrhagia, malaria, peptic ulcer and intestinal obstruction are examples to misdiagnosed ectopic pregnancy and should always is kept in mind (Orji et al., 2002). In the case presented by Punguyire et al a young woman attempted self-induced abortion and was misdiagnosed as pelvic abscess but was later diagnosed as appendicitis (Punguyire and Iserson, 2011). A vice versa example of our case where preoperative diagnosis of appendicitis turned out to be diffuse intraabdominal infection due to self-induced abortion.

Just as the young woman we present, especially teenagers are at risk for developing sepsis because they cannot easily access health facilities, usually are not aware of their pregnancy and lack the resource to finance a private doctor (Osazuwa and Aziken, 2007). Thus it is of great importance to provide sexual education, anonymous counselling and health facilities free of charge.

In our case the mystery about the method used for abortion could never be unveiled because the patient insisted on denying any action of self-induced abortion.

4. Conclusion

Women of reproductive age should be evaluated by a gynecologist to rule out obstetric or gynecologic pathologies in case of abdominal complaints. A pregnancy test is mandatory regardless of the history and/or marital status of the patient. Whenever possible pelvic ultrasonography should be performed and emergency practitioners as well as doctors of all specialties should work in collaboration.

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