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RESEARCH ARTICLE

LAPAROSCOPY IN THE DIAGNOSIS OF PSEUDO TUMOR PELVICPERITONEAL TUBERCULOSIS: ABOUT TWO CASES

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ABSTRACT

Pseudo-tumor peritoneal tuberculosis is a rare form of tuberculosis. The clinical and paraclinical features can mimic advanced ovarian cancer leading to unjustified radical surgery, often in a young woman. We report on two cases of pseudo-tumor peritoneal tuberculosis in patients aged 32 and 36 years. Peritoneal carcinoma of ovarian origin was clinically, radiologically and biologically suspected. Not only did laparoscopy help avoid laparotomy, but also relied on biopsy for diagnosis.

INTRODUCTION

Tuberculosis still remains a public health problem due to the global outbreak of human immunodeficiency virus (HIV) infection, precariousness, immigration and antibacterial *drug resistance*. In the pseudo-tumor forms, non-specific symptomatology, abdominal mass, and alteration in the general condition can misleadinto a malignant tumor pathology, which may lead to unjustified radical surgery,mostly in women in their genital activity period. The purpose of our work is to show the importance of laparoscopy in the diagnosis of this pathology through the presentation of two clinical observations.

PATIENTS AND OBSERVATIONS

Observation 1

Mrs. N.P, a 32-year-old primiparous patient with a history of mammary tumors from her mother, was referred from the Internal Medicine Department for management of an organic left ovarian tumor. That was about six months after onset, with isolated abdominopelvic pain associated with unassessed weight loss. The physical examination had revealed a rather large ascites. The test results showed a CA 125 level of 316 IU/ml. Pelvic ultrasound evidenced a quite solid left ovarian cyst of 50 X 48 mm in size with medium-sized serohematic peritoneal effusion. The frontal chest X-ray showed a left pleurisy of average abundance. The decision was made to carry out a diagnostic laparoscopy. Laparoscopy revealed whitish micronodules of variable size spread throughout the peritoneum, which suggested a miliary tuberculosis associated with a serohematic peritoneal effusion of average abundance (Figure 1). Ascites and nodules were collected for cytological and pathological examination. The patient was deemed outgoing two days after surgery with simple surgical procedures. The development was favorable under a 2-month antibacillary treatment with rifampicin, isoniazid and ethambutol, then after with rifampicin and isoniazid in the 4-month continuation phase.

Observation 2

Mrs. M.T, a 36-year-old primiparous patient with no particular pathological history, was admitted for pelvic pain which had been evolving for a year, together with asthenia and unquantified weight loss. The clinical examination was eventless. Pelvic ultrasound gave evidence a left ovarian haemorrhagic cyst associated with rather abundant ascites. The biological tests showed a CA 125 level of 244.3 IU/ml. The frontal chest x-ray was normal. Diagnostic laparoscopy had revealed a pelvic adhesive disease with the left appendix hosted within the loops, omentum and uterus; the left ovary was slightly dystrophic and hemorrhagic. There were also diffuse peritoneal whitish granulations and a serohematic peritoneal effusion of low abundance suggesting miliary tuberculosis (Figure 2). Biopsies on the peritoneum, omentum and ovary

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confirmed the diagnosis of tuberculosis by histology. Hospital release was authorized the day after the operation with the same antibacterial therapeutic protocol as previously concluded.

Determining CA125 levels does not really help diagnose pelvic tuberculosis, as it is a rising marker in more than 80% of ovarian cancers but also during certain chronic inflammatory conditions (Panoskaltsis *et al*, 2000).

Figure 1 Laparoscopic exploration shows the presence of multiple whitish granulations in the peritoneum, omentum and in the hepatic area (A). The uterus and appendages are embedded in a serohematic peritoneal effusion (B).

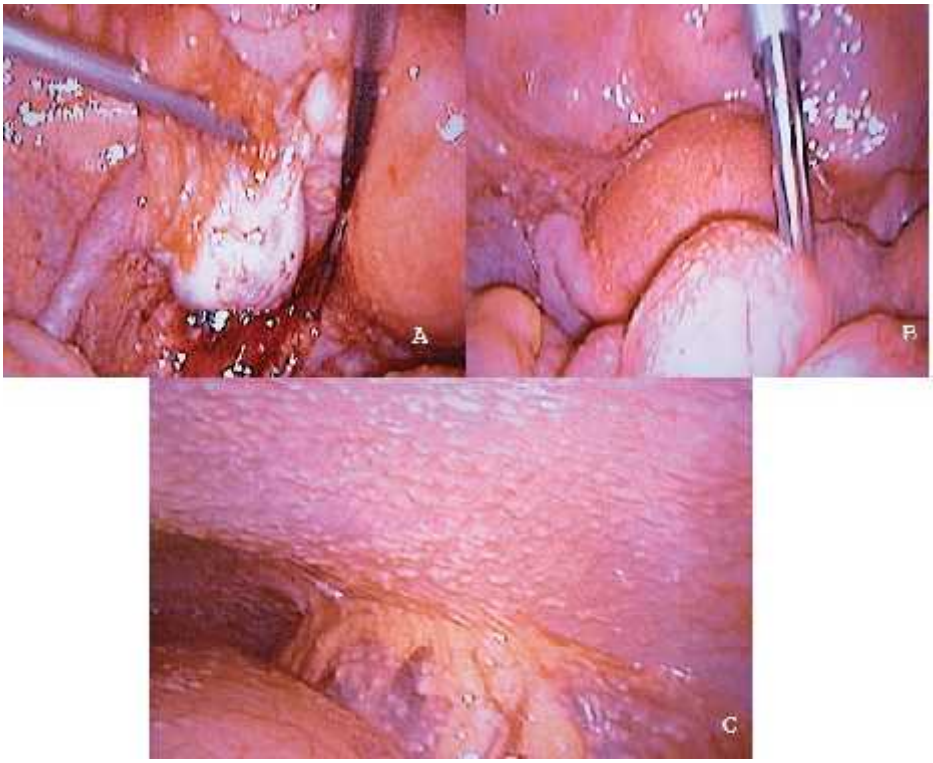

Figure 2 Laparoscopic exploration reveals a left haemorrhagic ovarian cyst (A) and the presence of multiple whitish granulations in the peritoneum and the loops (B, C).

DISCUSSION

Incidence of tuberculosis in the world has increased in recent years due to the upsurge in HIV infection. Pelvic localization occurs in 6 to 10% of cases of tuberculosis (Panoskaltsis *et al*, 2000), and the genital pseudo-tumor form represents 15% of all pelvic sites in women (Kim *et al* 2004). This can be seen at any age, mainly in young women aged 20 to 30, as evidenced by the two observations reported. The non-specific symptomatology of pelvic tuberculosis can sometimes mimic ovarian cancer. Indeed, pelvic pain, abdomino-pelvic masses, ascites and weight loss can be observed in both pathologies.

Imaging is tricky because there are no distinctive signs for differentiating ovarian tuberculosis from malignant tumors with peritoneal carcinomatosis. The lesion usually appears as a heterogeneous mass in dual component, solid and liquid. Sometimes a peritoneal effusion is observed. It can infiltrate the fat or fistulise into the neighboring organs. Fistula formation is highly suggestive of tuberculous, however it is a non-specific disease (Panoskaltsis *et al*, 2000 ; Kim *et al* 2004).

Laparoscopy remains the best diagnostic test with a sensitivity of up to 85% to 95% as confirmed by our two observations.

Three features of laparoscopy are described (Kasia *et al*, 1997; Bhargava *et al*, 1992; Chow *et al*, 2003) as follows:

- translucent whitish peritoneal granules, shaped as small standard streaks (the size of a pinhead or millet seed) sometimes surrounded by a translucent halo; However, they may be voluminous and vegetating, simulating peritoneal carcinomatosis;
- thick adhesions somewhat partitioning the peritoneal cavity, and sometimes binding the lower part of the greater omentumor transverse mesocolon to the abdominal wall;
- peritoneal inflammation resulting in a thickened, edematous, hypervascularized serous fluid and fibrous exudates likely to form an adherent rope.

Although these features are not specific, since they can be observed in granulomatos is (Crohn's disease, sarcoidosis), the macroscopic aspect is often evocative, showing a sensitivity of 92 to 100%, and a specificity of 84 to 100 % (figures by Chow *et al*. from five series of the literature) (Chow *et al*, 2003). Laparoscopy especially allows the histological sampling of granulations for the purpose of definitive diagnosis.

This approach is less aggressive than laparotomy, though the complication rate is close to 2.7% (bowl perforation and bleeding mainly due to necrotizing/ulcerative and fibrous/adhesive forms of the disease) (Adsuar *et al*, 2004). However, the discovery of a plastic peritonitis urges to change. Laparotomy should be used for the fibrous/adhesive types or in case of complication of the laparoscopic procedure (Hamdani *et al*, 1997 ; Bennani*et al*, 1988).

The treatment of peritoneal tuberculosis is based on the same treatment regimen as the other forms of tuberculosis, namely a 4-drug regimen for two months followed by a dual therapy for eight to ten months according to usage. Laparoscopyas a second option can be discussed at the end of the treatment (Bennani*et al*, 1988).

CONCLUSION

Laparoscopic biopsy remains the best diagnostic test for pelvic-peritoneal tuberculosis with good sensitivity. It is more advantageous than laparotomy.

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