

Case Report

Umbilical Endometriosis: A Diagnostic Dilemma

Mohamed I Seleem, Ahmed M Al Hashemy, Mahmoud A Obeid
Armed Forces Hospital, Southern Region, Department of Surgery, Khamis Mushayt, Saudi Arabia

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ABSTRACT

A 45-year-old woman presented to the surgical outpatient with an umbilical nodule of one year's duration. The umbilical nodule was diagnosed as metastatic adenocarcinoma by fine needle aspiration cytology. She was investigated thoroughly and there was no evidence of any recognisable underlying condition for

such a diagnosis. A wide surgical excision of the nodule was performed and histopathology excluded malignancy but confirmed the diagnosis of endometriosis. Umbilical endometriosis is a very rare surgical condition but should be considered in the differential diagnosis of any umbilical nodule.

KEYWORDS: endometriosis, malignancy, umbilical nodule

INTRODUCTION

In the late nineteenth century the term endometriosis was coined by Sampson^[1] to characterise ectopic tissue possessing the histologic structure and function of the uterine mucosa. It also includes those abnormal conditions which may result not only from the invasion of organs and other structures by this tissue, but also from its reaction to menstruation^[1]. Endometriosis is a well-recognised gynaecological condition that presents infrequently to general surgeons. Subcutaneous endometriosis is a rare entity that should be suspected in any female presenting with cyclic pain emanating from a mass in the vicinity of an abdominal surgical scar or the umbilicus. We present our case to highlight the challenges involved in its diagnosis.

CASE REPORT

A forty-five year old woman presented to the surgical outpatient clinic with the history of a bleeding umbilical nodule of almost one year's duration. She had pain at the umbilicus for two years before the nodule appeared. There were associated irregular periods, severe dysmenorrhoea, secondary infertility and anaemia. There was a past medical history of excision of a right breast fibroadenoma.

On examination she was pale, with a blood pressure of 107/68 mm Hg. and a pulse rate of 70/minute. There was a 3 X 2 cm lobulated umbilical nodule, firm, tender, not reducible or pulsatile and without an impulse on coughing. There was a small bleeding spot under the skin but without ulceration. Otherwise, the systemic review was unremarkable.

Her hemoglobin was 7.4 g/dl, white blood cell count $2.9 \times 10^9/l$ and platelets $166 \times 10^9/l$. A diagnosis of either Sister Joseph's nodule or endometriosis was entertained. Fine needle aspiration cytology revealed the suspicion of malignancy probably due to metastatic adenocarcinoma (Fig. 1). The patient was screened to detect an underlying tumour by upper gastrointestinal tract endoscopy and a barium follow-through study. Both studies were negative. A CT-scan revealed an enlarged, enhanced uterine mass, with an irregular outline. A local excisional biopsy of the umbilical nodule revealed umbilical endometriosis (Fig. 2).

The patient did well postoperatively and was seen by a gynaecologist who started her on Danazol 200mg twice daily and an iron supplement. Subsequently, she underwent a hysterectomy.

DISCUSSION

The prevalence of pelvic-endometriosis has been reported to be as high as 44% in asymptomatic women undergoing laparoscopy for non gynaecological symptoms^[2], while the incidence of umbilical endometriosis is estimated to be only 0.5% to 1% of all women with an extragonadal endometriosis^[3,4]. The presentation of endometriosis to general surgeons is rare, atypical and presents diagnostic difficulties^[5,6]. In our case, the patient presented with a bleeding umbilical nodule. Fine needle aspiration cytology raised the suspicion of malignancy. Based on this result patient underwent an upper gastrointestinal tract endoscopy, a barium follow-through study and CT-scan in order to detect an underlying tumour. The outcome of the

Address correspondence to:

Dr. M. I. Seleem, Department of Surgery, Armed Forces Hospital, Southern Region, P. O. Box 101 Khamis Mushayt, Kingdom of Saudi Arabia.
Tel / Fax +966 7 251 0587; E-mail: seleem_1961@hotmail.com; mohamed_seleem@yahoo.com

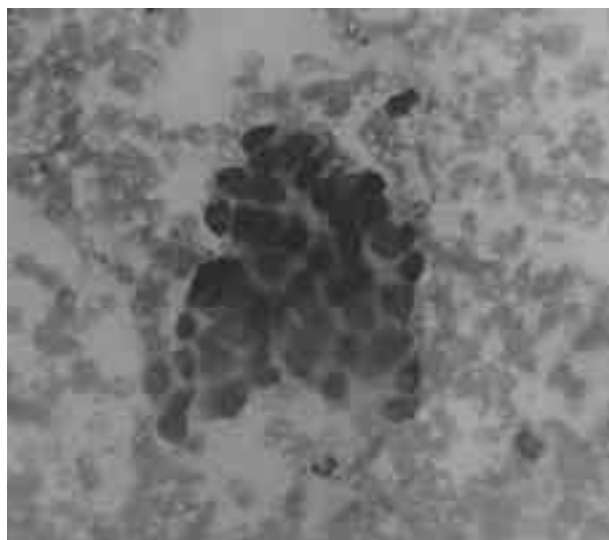


Fig. 1: Fine needle aspiration cytology showing epithelial cells in clusters with enlarged irregular nuclei and prominent nucleoli. The picture gives a suspicion of malignancy.

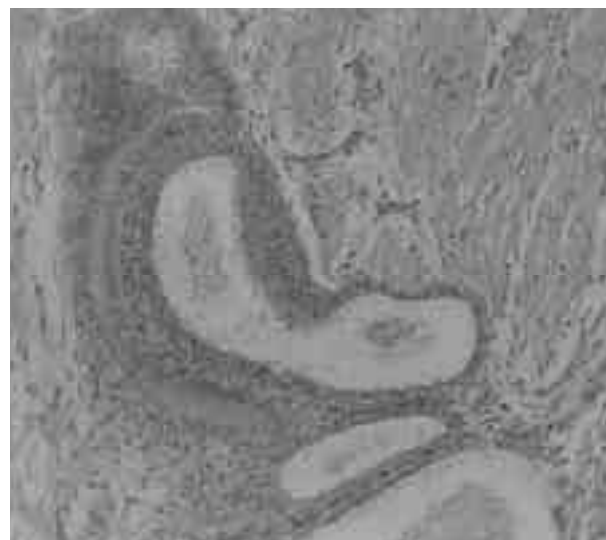


Fig. 2: Histopathology showing glands lined by 2-3 epithelial layers and the stroma around the glands showing bleeding typical of endometriosis.

above studies was inconclusive. Therefore a decision was made to take an excisional biopsy, which confirmed the diagnosis of umbilical endometriosis. Umbilical endometriosis occurs in women between 30 to 40 years of age. It is usually a solitary, firm, brownish or bluish nodule ranging from 0.5 to 3 cm in size^[7,8]. Approximately 1% of women with endometriosis has a nodule of umbilical endometriosis^[9]. The mechanism of formation of umbilical endometriosis appears to be unknown, although, there are two major theories: metastasis and metaplasia. The metastasis theory suggests that the implantation is either by lymphatic or hematogenous spread. Sampson^[10], demonstrated the invasion of pelvic lymphatics by endometrial tissue in two cases. Basing his evidence on five cases involving endometrial glandular tissue in the regional lymph nodes, Halban^[11] was the first to postulate lymphatic dissemination as a mechanism for all forms of endometriosis. Javert^[12] subsequently confirmed the lymphatics as the route for propagation of the endometriosis. On other hand, in 1927 Sampson^[13] observed the presence of endometrium in venous sinuses. This offers the best explanation for the rare endometrial foci occurring in the extremities. The metaplasia theory asserts that embryonic coelomic mesothelium under some stimuli, differentiates into endometrial tissue^[14]. Steck and Helwig^[15] suggested a combination of theories, claiming that "endometrial cells themselves stimulate imitative metaplasia (cellular replication) when they are transported by any means to a susceptible tissue". Umbilical endometriosis may arise by lymphatic or hematogenous dissemination, or by metaplasia, or possibly by a combination of the two.

The differential diagnosis of umbilical nodules includes: embryological rests, irreducible umbilical hernia, pyogenic granuloma, primary malignancy such as malignant endometriosis in the umbilicus^[16], or secondary metastatic tumour from an intra-abdominal malignancy. Surgical excision is necessary for proper histopathological diagnosis that will dictate the plan of management.

CONCLUSION

Endometriosis is an uncommon condition in the field of general surgery. It should be included in the differential diagnosis of women presenting with an umbilical swelling. The diagnosis of an umbilical nodule should be made by excision biopsy and histological examination rather than by fine needle aspiration.

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