

## CASE REPORTS

# Abdominal wall metastasis from ovarian cancer after laparotomy. A case report

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### Summary

A 27-year-old woman underwent surgery for an abdominal wall mass later confirmed to be a relapse of Stage I ovarian mucinous adenocarcinoma. The authors stress that caution should be observed during laparotomy to remove a malignant neoplasm in order to avoid parietal dissemination.

*Key words:* Ovarian cancer; Laparotomy; Abdominal wall metastasis.

Recent studies reported the occurrence of port-site metastases following laparoscopic removal of ovarian cysts. Moreover in our experience, abdominal wall relapse can also in rare cases occur after an inadequate surgical laparotomy removal.

### Case report

In June 1996, a 24-year-old nulliparous presented with abdominal pain. During physical examination a 20-cm mass was discovered on palpation. Ultrasonography (US) and computed tomography (CT) scan showed an ovarian mass with a solitary hyperechogenic intracystic foci. The patient underwent immediate laparotomy with a transverse low incision, and aspiration was used to remove the right ovary containing the cyst. Histopathological examination subsequently revealed a mucinous adenocarcinoma with stromal invasion. The tumour was not graded. A complete staging laparotomy (cytologic examination of peritoneal lavage, multiple peritoneal biopsies, infra-colic omentectomy, pelvic and para-aortic lymphadenectomy, left ovarian biopsy, appendectomy), through the same incision, was performed three months after the initial surgical procedure showing no residual tumor. The International Federation of Gynecology and Obstetrics (FIGO) stage 1988 was staged from Ia to Ic and cyst drainage was considered an intraoperative rupture [1]. Chemotherapy was not administered and a period of watchful waiting was decided.

In February 2000, the patient's General Practitioner referred her for pain, swelling and an abdominal wall mass first observed four months previously. Physical examination revealed a non-tender soft-tissue mass, three by four centimeters in size, that was palpable in the lower part of the left rectus abdominis. Color Doppler US confirmed the localization and showed a well-defined solid and hypervascular mass (Figure 1). Magnetic resonance imaging (MRI) scans revealed a heterogeneous lesion slightly touching the aponeurosis (Figure 2).

Removal of the abdominal mass required a wide excision and repair of the rectus sheath defect with a synthetic mesh. Histopathological examination demonstrated a mucinous adenocarcinoma.

The patient is currently being treated with taxane/platinum combination chemotherapy.

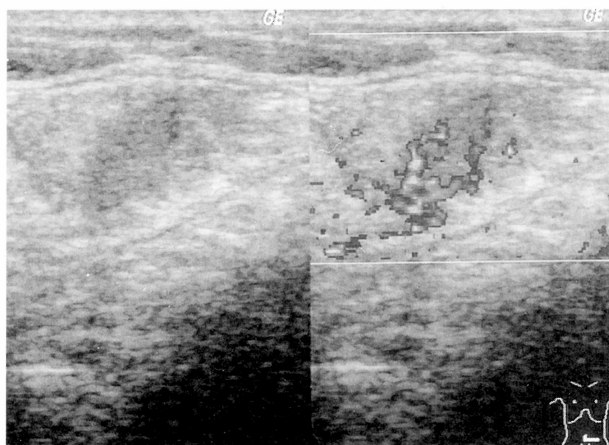


Figure 1. — Color Doppler ultrasonography showing a well-defined and hypervascular mass in the rectus abdominis measured 22 × 20 mm.

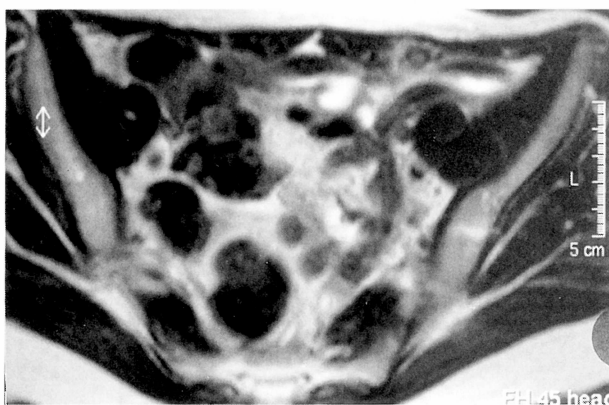


Figure 2. — Abdominal magnetic resonance image scan revealing a heterogeneous lesion in the left rectus abdominis.

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## Comment

Recent evidence based on clinical cases and experimental studies confirm that the incidence of parietal metastasis following cancer surgery is increased by a laparoscopic approach [2]. Contrary to colon cancer, the incidence of abdominal wall recurrence in patients undergoing open surgery for ovarian neoplasms remains unknown, and is considered a rare occurrence. Extreme caution is recommended when removing a potentially malignant neoplasm from the pelvis during open laparotomy [3]. Difficulty consists in avoiding any peritoneal and parietal dissemination by dissecting and extracting a closed cyst.

Intraoperative rupture may worsen the prognosis of patients with early-stage ovarian cancer [3, 4]. In contrast, some studies have suggested that intraoperative rupture is not a risk factor and therefore does not affect survival. However, these studies lacked information on histological grade stratification. The upstaging of ruptured (or drained) malignant tumours from Ia to Ic often leads to adjuvant therapy [5].

Degree of differentiation is the most powerful prognostic indicator in Stage I ovarian cancer and should be used in decisions on therapy in clinical practice [3]. Although different grading systems have been proposed, the usefulness of such systems to separate aggressive from non-aggressive mucinous ovarian carcinomas is unclear. Patients with grade 3 tumour require adjuvant therapy [5], but some investigators do not grade mucinous carcinomas as they believe there are no conventional grading parameters (cytologic atypia, mitoses) that identify different groups of mucinous tumours with different prognoses [6]. Stromal invasion is considered present when there are glands with irregular borders or single cells infiltrating a desmoplastic stroma. According to Watkin *et al.* [6], this is the most significant pathologic factor influencing survival. In this case, postoperative chemotherapy should be considered.

Parietal seeding of a potentially curable malignancy could put the patient at risk. Good surgical technique, not only during laparoscopic procedures but also during open surgery, and adequate postoperative treatment can reduce the risk of abdominal wall metastasis.

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## References

- [1] Pettersson F., Copleson M., Creasman W., Ludwig H., Sheperd J.: "Annual report on the results of treatment in gynecological cancer: statements of the results obtained in patients treated from 1979 to 1981, inclusive 5-year survival up to 1986". Stockholm: International Federation of Gynecology and Obstetrics. 1986, 110.
- [2] Neuhaus S. J., Texler M., Hewett P. J., Watson D. I.: "Port-site metastases following laparoscopic surgery". *Br. J. Surg.*, 1998, 85, 735.
- [3] Vergote I., De Brabanter J., Fyles A. *et al.*: "Prognostic importance of degree of differentiation and cyst rupture in stage I invasive epithelial ovarian carcinoma". *Lancet*, 2001, 357, 176.
- [4] Sainz de la Cuesta R., Goff B. A., Fuller A. F., Nikrui N., Eichhorn J. H., Rice L. W.: "Prognostic importance of intraoperative rupture of malignant ovarian epithelial neoplasms". *Obstet. Gynecol.*, 1994, 84, 1.
- [5] National Institutes of Health Consensus Development Panel. "Ovarian Cancer: screening, treatment and follow-up". *J.A.M.A.*, 1995, 273, 491.
- [6] Watkin W., Silva E. G., Gershenson D. M.: "Mucinous carcinoma of ovary: pathologic prognostic factors". *Cancer*, 1992, 69, 208.

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