

CASE REPORT

Accidental detection of salpinx carcinoma after omphalocele repair

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Abstract: *Background:* Carcinoma of the fallopian tube is a rare disease accounting for <1 % of all gynecologic malignancies.

Case: We present the first case of an accidental diagnosis of fallopian tube carcinoma after omphalocele repair.

Conclusion: Between 9 to 14 % of cases are incidental findings during the work-up or exploratory laparotomy.

A review of the literature regarding predisposing factors, histology, clinical and ultrasound appearance, treatment as well as survival rates was also presented (*Tab. 1, Ref. 33*). Full Text (Free, PDF) www.bmj.sk.

Key words: fallopian tube carcinoma, omphalocele, accidental diagnosis.

Carcinoma of the fallopian tube is a rare disease accounting for <1 % of all gynecologic malignancies (1, 2). Under the light microscopy, it appears similar to the epithelial ovarian carcinoma. It resembles epithelial ovarian carcinoma in its clinical behavior and response to treatment. Although locally confined disease occurs more frequently in fallopian tube cancer than in ovarian cancer, disease progression follows a similar pattern in the two malignancies. The most common route of metastasis is intraperitoneal. A spread to distant organs may also occur, but usually presents late in the clinical course. However, the relative rarity of fallopian tube cancers has made the collection of outcome and survival rates from large cohort studies difficult.

Case Report

We present a 63-year-old woman (gravid: 7) who had been operated at the Department of Surgery for the omphalocele repair. The histological examination of the omphalocele's sac and the included omentum showed blocks of adenocarcinoma grade 2 of unknown origin (differential diagnosis between ovarian or peritoneal cancer according to pathologists). The patient underwent further clinical and laboratory evaluation, including C/T scan, U/S and colonoscopy which showed no pathology. CA125 levels were up to 8 IU/ml (normal range < 35 IU/ml). The patient underwent an exploratory laparotomy during which an atrophic uterus and ovaries were found. The peritoneal lavage was positive for malignancy. The patient underwent a total hysterectomy with bilateral oophorectomy plus omentectomy. During the omen-

tectomy, we found a mass in the omentum (approximately 3 cm) which was sent for frozen section but was negative for malignancy. After 15 days, the histological examination showed adenocarcinoma of the left salpinx grade 1 to 2 with microscopic lesions on the right salpinx and the omentum (stage IIIa). The omental mass that had been sent for frozen section was finally reported as "non specific inflammation due to foreign body (suture)" probably from the omphalocele repair. The patient received six cycles of carbo-taxol. She was followed-up regularly and for four years there was no evidence of disease. Then, on her next visit, a block of inguinal lymph nodes was found. The biopsies taken proved that they were infiltrated by the same adenocarcinoma. Further laboratory investigation of the abdominal organs did not detect any other metastatic site. She underwent 8 cycles of cisplatin-taxol. 6 months after the completion of the salvage treatment for the inguinal metastasis, she is alive with no further evidence of disease.

Discussion

We reviewed the literature (using the Pubmed/National Library Medicine database and Cochrane library) with the search terms: fallopian tube carcinoma.

Less than 1 % of primary gynecological cancers are tubal in origin and the average annual incidence is about 3.6/1,000,000 women (1–3). This incidence may be underestimated as many advanced cases are mistakenly attributed to ovarian cancer. The mean age at time of diagnosis is 55 years (4). The age ranges from 18 to 87 years reaching a peak at 60–64 years. Between 9 to 14 % of cases are incidental findings during the work-up of other gynecological disorders (5).

The etiology of fallopian tube carcinoma is unknown. There are no known predisposing factors, but there is an association with low parity and infertility (6). A past history of PID and

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especially of tuberculous salpingitis, has been sometimes reported in the literature (7–9).

Fallopian tube carcinoma should be considered as a clinical component of the hereditary breast-ovarian cancer syndrome, and may be associated with BRCA-1 and BRCA-2 mutations (10, 11). Zweemer et al (12) showed that there are molecular links between cancer of the fallopian tube and BRCA-1 germline mutation. Genetic evaluation should be offered to women who present with fallopian tube carcinoma.

The most common histological type is serous carcinoma, which microscopic appearance resembles the serous ovarian carcinoma, whereas less frequent variants are endometrioid, clear cell, transitional cell, and undifferentiated carcinoma (13, 14). Regarding histological grade, most of them are poorly differentiated (15).

Our case presents a „lucky patient“ who had an accidental detection of the malignancy. In its early stages this type of malignancy is difficult to be diagnosed due to nonspecific symptoms and the lack of an appropriate screening method. A triad of profuse vaginal discharge (Latzke sign), pain and adnexal mass is the diagnostic feature of the disease (4, 6, 16). The syndrome of crampy lower abdominal pain followed by profuse watery discharge has been found in 15 % of patients (17). The most frequent symptom reported by more than 50 % of the patients is postmenopausal bleeding (4, 6).

Most cases of primary fallopian tube carcinoma remain undiagnosed preoperatively. When dilatation and curettage is negative for endometrial carcinoma and symptoms persist, the diagnosis of fallopian tube carcinoma should be considered. In few cases, the preoperative diagnosis could be made by abnormal Pap smear, but there are no specific cytological features to distinguish cancers of tubal origin from cancers of the endometrium, endocervix or ovary. When compared to ovarian cancer, fallopian tube carcinoma is often diagnosed at an earlier stage because of abdominal pain secondary to tubal distention.

Transvaginal color and pulsed Doppler can detect areas of neovascularisation within the tubal carcinoma and can distinguish it from other benign adnexal pathology (18–20). Transvaginal sonography reveals the complex sausage-shaped and/or cystic structures in the adnexal region. Additional colour Doppler examination depicts low vascular impedance (RI ranged from 0.29 to 0.40). In all reported cases of fallopian tube carcinoma, the ultrasound findings are complex, predominantly cystic adnexal masses and/or sausage-shaped structures apparently separated from the uterus.

Bilateral tubal involvement has been reported in 10–27 % of cases (13, 15). Fallopian tube malignancy is shown to spread via lymphatic route and by seeding and embolisation at an early stage. The peritoneum becomes involved via direct spread. Usually there are no symptoms until the disease is well advanced. Direct extension, lymph vascular invasion and/or transcoelomic exfoliation are the ways of spread. Pelvic and para-aortic lymph nodes are often confirmed to be involved in patients undergoing systematic lymphadenectomy (21). Fallopian tube carcinoma may rarely present with metastatic inguinal lymphadenopathy like in

Tab. 1. Five-year Survival for Women with Fallopian Tube Carcinoma.

FIGO stage	Authors	
	Rosen et al (31)	Baekelandt et al (32)
I		73 %
II		37 %
I/II	59 %	
III		29 %
IV		12 %
III/IV	19 %	

presented patient (22). Finally, brain metastases in fallopian tube carcinoma are very rare (23).

To avoid a long delay until definitive surgical therapy is performed, an intraoperative frozen section should be taken, when dealing with a suspicious tubal mass. In cases of postmenopausal women with adnexal masses, complex sonographic features, and elevated CA-125 levels, an open laparotomy is recommended. Although many laparoscopies are performed for adnexal masses, a staging laparotomy should be performed immediately or as soon as possible after the diagnosis of tubal malignancy in order to avoid understaging or undertreatment.

The optimal therapeutic strategy for the primary fallopian carcinoma is similar to that of ovarian carcinoma and as such staging is surgical and consists of total abdominal hysterectomy, bilateral salpingo-oophorectomy, washings, pelvic and para-aortic node dissection, multiple peritoneal biopsies and omentectomy (24, 25). Staging is performed according to the FIGO classification. Studies suggest that tubal carcinomas respond to platinum and taxanes (6, 26–28). Platinum based regimens achieve an objective response in 53–92 % of patients with advanced fallopian tube carcinoma, and paclitaxel has been found to be an active salvage treatment in platinum-refractory disease (29). The relative rarity of fallopian tube cancers make phase III trials impractical.

A residual disease greater than 2 cm is recognized as a poor prognostic factor (30). A maximum effort during tumor resection is recommended.

In 1978 Sedlis found that the 5-year survival rate for all cases of tubal carcinoma is 38% regardless the stage (16). Survival rates were similar in two studies performed by Rosen et al (31) for the Austrian Cooperative Study Group for Fallopian Tube Carcinoma and by Baekelandt et al (32) from the Norwegian Radium Hospital.

According to FIGO Annual Report 1998 (33), the five-year overall survival rate was 56.1 % in the entire series of 83 patients with carcinoma of the fallopian tube: 83.6 % in stage I, 51.6 % in stage II, 35.9 % in stage III, and 0 % in stage IV (Tab. 1).

Fallopian tube carcinoma is a rare entity and its preoperative diagnosis is very difficult due to its unspecific manifestation and findings in the complementary studies. The natural history and optimal management of fallopian tube carcinoma have not been largely well-defined.

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