Case report

Malignant Transformation of Ovarian Mature Teratoma: About a Case and Literature Review

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Abstract

The cancerous teratoma of the ovary is a rare entity. We report the case of a 57-year-old woman post menopausal with malignant transformation of ovarian mature teratoma who was treated in the gynecology and medical oncology departments of CHU HASSAN II in Fez. The patient underwent bilateral adnexectomy and a total hysterectomy with omentectomy. The evolution was marked by the appearance of carcinomatosis nodules postoperatively. She received chemotherapy with platinum and taxanes. She had complete remission after 6 cycles and has remained under good control at present.

Keywords: ovary-malignant transformation-squamous cell carcinoma-menopause

Introduction

Mature or cystic teratoma of the ovary is a benign non-seminomatous germ cell tumor[1]. The malignant transformation is a rare complication that is observed in 1 to 2% of cases.[2]

Squamous carcinoma is the most common malignancy followed by adenocarcinoma and melanoma[3][4].

The mechanism of the malignant transformation arising in ovarian MCT is not clear but considering the fact that 80% of MCTs are diagnosed during the reproductive age, malignant transformation seems to be related to the long-term presence of non-removed MCT in the abdomen[3].

It is usually observed in menopausal women.[5][6] This cancerization occurs in epidermoid carcinoma in 80% of cases, more rarely in melanoma or sarcoma[7].

The prognosis of MCT is highly dependent on age, stage, and optimal cytoreduction. Adjuvant treatment has not been standardized, although our experience supports the use of combination platinum/taxane chemotherapy[8].

Case Presentation

We report a case of a 57-year-old multiparous woman, post menopausal, who had been cholecystectomized 7 years ago. She had pelvic pain with progressive increase in abdominal volume for six months without bleeding or other associated signs.

The clinical exam had revealed an abdominopelvic mass of 6 cm. Pelvic ultrasound showed a non-Dopplerized heterogeneous mass measuring 9 cm in the right ovary. The abdominal CT complement showed a large heterogeneous right ovary in favor of an ovarian dermal cyst measuring 87 mm. (figure)
The patient had a right adnexectomy. On macroscopic examination, it was a cystic formation measuring 10 / 8cm containing a compact yellow substance and hair.

Microscopic examination showed a benign tumoral proliferation made of cystic formations lined by an epithelium of both cylindrical and squamous respiratory type associated with carcinomatous tumor proliferation.

The pathological study concluded in mature teratoma carcinized in squamous cell carcinoma.

The second surgical procedure consisted of a total hysterectomy with a left adnexectomy and an omentectomy, the pelvic and lumbar aortic lymphadenectomy were not performed because of the hemorrhagic dissection of the peritoneum and the hypotension of the patient installed in peroperative. An Histological exam did not reveal any tumor residue.

A postoperative TAP CT showed an infiltration of peritoneal sheets with a carcinomatosis nodule in the parietocolic left atrium.

The patient received chemotherapy 4 courses of carboplatin paclitaxel with complete response and disappearance of carcinomatosis.

After six courses of chemotherapy in total, the patient remained under good control at present.

**Discussion**

The carcinogenic mature teratoma of the ovary is a dermoid cyst in which a carcinoma develops on one of its mature components.[9] This cancerization is seen in 1 to 3% of cases.[1][10] The risk of malignant transformation of a dermoid cyst increases with age.[11][12].

More than 75% of dermoid cysts are carcinized in post menopause.[13][14]. The average age is 54[15]. Our patient was 57 years old and she was in the menopause.

Clinically, the symptomatology is similar to that of benign ovarian tumors. The most frequent manifestations are a pelvic pain, an abdominal distension and a transit disorders.[11][13].

Radiologically, there are signs suggestive of malignancy including invasion of organs, increased wall thickness, the presence of haemorrhagic necrosis and carcinomatosis nodules.[10][13][15].

Biologically, there is a serum marker useful in preoperative diagnosis and early detection of recurrence. It is SCAA (squamous cell carcinoma antigen) but a low level does not eliminate a carcinoma teratoma[14][15][16].

All histological types can be found: adenocarcinoma, squamous cell carcinoma, undifferentiated carcinoma, more rarely sarcoma melanoma and lymphoma[14][17].

Surgical treatment remains a controversial subject. The unilateral adnexectomy is recommended in premenopausal women for stage IA[18].

For postmenopausal women, a wider exeresis surgery is recommended regardless of the stage[13][18][19].

Regarding chemotherapy, in localized forms, the treatment is similar to that of ovarian cancer, some authors recommend the use of alkylating agents[18][19]. It is the same in metastatic forms.

In the literature, radiotherapy does not bring any benefit[19].

The prognosis remains pejorative. It depends mainly on the grade of the vascular invasion of the break-in of the ovarian capsule but also on the histological type[11][16].

**Conclusion**

The malignant transformation of ovarian mature teratoma is a rare entity. The diagnosis of certainty remains anatomopathological. The treatment is multidisciplinary depending on the stage of the disease combining surgery chemotherapy and radiotherapy in some cases.

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