

Ovarian Metastasis of Breast Cancer

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Abstract— Frequently cited as a site of metastasis, the ovaries are often the site of secondary sites of breast cancer. Ovarian metastases from breast cancer are not exceptional and can be seen at any time of the disease including as the first site of metastasis; they are the clinical progression of the disease rarely the initial manifestation. Optimal surgical resection of metastatic disease, modeled on surgery for ovarian cancer, appears to favorably influence survival, regardless of complementary medical treatments. Laparoscopy remains a good indication to establish the diagnosis (biopsy) and assess the disease progression (resectability). We report to you a case of a patient operated on for breast cancer a year earlier, presenting with a metastatic adnexal mass of breast cancer.

Keywords— Ovaries, metastasis, breast cancer, surgery.

I. INTRODUCTION

The prognosis of breast cancer, the most common cancer in women, depends essentially on the existence of metastases. Their preferred sites are : The liver, the skeleton and the lungs. Ovarian metastasis seem to be rarer, even exceptional. Their diagnosis, often late, due to their clinical latency, presents therapeutic difficulties. Anatomopathological examination is the only examination that will allow the diagnosis to be made with certainty. The complete surgical resection of these metastasis seems to bring a benefit in terms of survival. This benefit is, moreover, a function of the residual tumour volume and the interval between the initial diagnosis of breast cancer and the appearance of ovarian metastases. The occurrence of secondary ovarian lesions is four to five times higher in infiltrating lobular carcinomas than in infiltrating ductal carcinomas. Median survival is estimated at 2 years, and 5-year survival is approximately 18%.

II. METHODS

Mrs. A.KH, 52 years old, operated on for left breast cancer one year ago, was referred to us for pelvic pain and heaviness of progressive onset.

Clinical examination of a patient in good general condition revealed a palpable mass in the left iliac fossa measuring 6 cm in diameter. Ultrasound revealed a heterogeneous left latero-uterine formation of adnexal origin. The CT scan confirmed the solid nature of the 46/35 mm adnexal mass, with a layer of ascites [figure 1]. The CA125 level was 150 IU/ml.

After consultation, surgical resection was proposed, followed by chemotherapy. Surgical exploration found a solid left ovarian mass with no other location. The rest of the exploration was unremarkable. It was decided to make do with a resection taking the mass and peritoneal biopsies [Figure 2].

The postoperative course was straightforward and the patient was discharged on day 3. Examination of the surgical specimen showed that the tumor was a metastasis of a breast carcinoma.

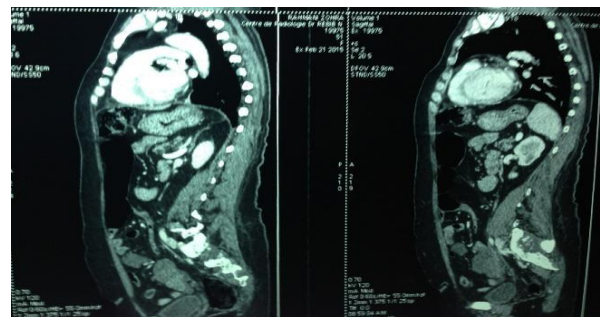
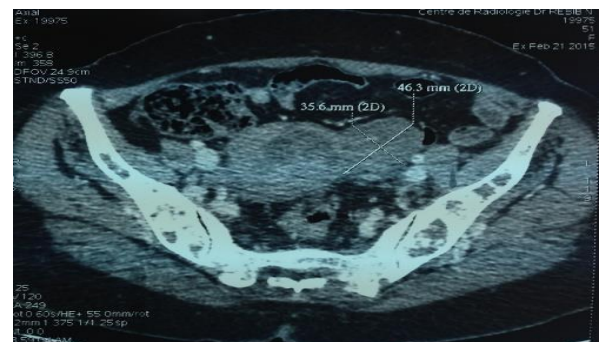


Fig. 1. CT scan of pelvic mass



Fig. 2. Ovarian mass

III. DISCUSSION

Secondary ovarian locations account for 5-10% of ovarian neoplasia and breast neoplasia accounts for 30% of these

metastasis. Lobular carcinoma shows a particular tropism for the pelvis and adnexal, unlike ductal carcinoma [1,2]. The discovery of an adnexal mass in a patient with a history of breast cancer raises 2 questions? Primary cancer or secondary location?

As medical imaging cannot differentiate between them, surgical exploration is the only way to make the diagnosis and to assess the resectability of the tumour [3].

They are most often discovered by chance, multiplied by ultrasound and CT scans carried out in the context of extension assessments, surveillance or tamoxifen treatment. Approximately 10% of ovarian and peritoneal metastasis will be found by routine examination [3,4]. On the *other hand*, this practice of systematic check-ups, which is not always in line with international recommendations, can lead to multiple and unnecessarily aggressive surgical procedures since, even in this population of patients treated for breast cancer, ultrasound anomalies are benign in 74 to 88% of cases [2,5,6].

The pathologist's difficulties will be greater if he or she is unaware of the patient's history, or if it is a metastasis that is revealing, but it is precisely in the latter situation that the differential diagnosis will be of greater importance [7,8]. Cytological analysis of ascites fluids is often insufficient to distinguish the origin of adenocarcinomas despite the use of a battery of immunoreaction markers [9].

The histological diagnosis of breast cancer metastasis will sometimes be straightforward. In 25% of cases, however, the breast metastasis may have histological features mimicking a primary ovarian cancer or even aspects of luteoma, dysgerminoma, granulosa tumour or carcinoid [6,7,8]. Immunohistochemical analysis will then be essential for the differential diagnosis [9].

Surgical exploration can rarely be avoided:

In the case of a pure ovarian anomaly, in the absence of any sign of suspicion, after breast cancer or in the absence of a previous history, a wait-and-see attitude and surveillance should be the rule to avoid operating on too many benign anomalies [10,11,12]. On the other hand, in the presence of elements of suspicion of malignancy (size > 5 cm, clear increase in CA125, echo-graphic appearance of a multilocular and mixed cyst, there are only exceptionally significant arguments in favour of a breast cancer metastasis [13,14,17,18] and these patients should be referred to oncogynaecology [16].

Laparoscopy remains a good indication to establish the diagnosis (biopsy) and to evaluate the evolution of the disease (resectability)[15].

An ovarian or pelvic location, the only metastatic site, may be treated by bilateral adnexectomy with or without hysterectomy [8], complemented by a full abdominal exploration.

In the case of peritoneal carcinosis, extended surgery corresponding to the checklist for ovarian cancer is recommended [10]: hysterectomy with adnexal, omentectomy, para-aortic and pelvic lymph node dissection. The interest of an optimal tumor reduction is underlined by several authors, with a threshold of residual disease of 1 to 2 cm [14,16,19].

IV. CONCLUSION

Ovarian or peritoneal metastasis of breast cancer are not exceptional and can be seen at any time during the disease including as the first metastatic site and are the clinical progression of the disease rarely the initial manifestation.

Lobular breast cancer is the most common origin but a different histological type from the initial disease is never sufficient to rule out metastasis. The diagnostic difficulty will always be to distinguish them from a second primary ovarian cancer. Imaging is not very discriminating in the diagnosis, in case of a history of breast cancer. The progression of metastatic breast cancer to the ovaries does not seem to influence survival compared to another metastatic site. The prognosis is especially impaired when the abdominal-pelvic extension occurs early in the course of the initial disease and the abdominal involvement is significant.

Optimal surgical resection of metastatic disease, based on the model of ovarian cancer surgery, appears to have a favourable influence on survival, irrespective of additional medical treatments. Laparoscopy remains a good indication to establish the diagnosis (biopsy) and to evaluate the evolution of the disease (resectability).

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