

## MAMMARY AND LYMPH NODE METASTASIS OF OVARIAN PSAMMOCARCINOMA

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### ABSTRACT

The metastasis of breast ovarian cancer is an unusual situation as a remote location of cancer. We report the case of a patient aged 45 years operated for ovarian cystadenocarcinoma treated by total hysterectomy with omentectomy and chemotherapy. The balance sheet expansion was negative. Two years after the end of treatment, the patient was presented with a metastasis of right breast at the upper outer quadrant. Mammography has objectified opacity limited spiculée evil suspicious of malignancy. The lumpectomy expanded study has concluded an extemporaneous cystadenocarcinome ovarian serous papillary exeresis with healthy limits. A lymph node was done, he shows three out of ten lymph nodes invaded taken. The origin of intramammary carcinoma has been attributed to the ovary. The treatment consisted of chemotherapy. We realized with this observation, a literature review on specific forms of metastatic ovariancarcinoma.

**KEYWORDS:** Ovarian cancer; Metastasis; Breast.

### INTRODUCTION

Intramammary metastases from extramammary tumours are extremely rare. All primary tumours can metastasize breasts, the most frequently found of which are: lymphomas melanomas rhabdomyosarcomas. lung, ovarian, kidney and stomach tumours.<sup>[1]</sup> The ovarian origin of these mammary metastases is exceptional, only a few cases are reported in the literature.<sup>[2]</sup>

The onset of a breast nodule after ovarian cancer first requires the elimination of a primary breast tumour because the main challenge of diagnosis is to differentiate them from primary breast cancer

From a clinical case, we report the case of breast metastasis of ovarian carcinoma. We will discuss the clinical and paraclinical signs that make this diagnosis possible, while raising the different therapeutic possibilities.

### OBSERVATION

Patient 45 years old, married, no children, no significant medical history. She had consulted three years ago for abdominal distension. Clinically, the patient had an abdominal pelvic mass arriving at the umbilicus. An abdominopelvic CT had objectified a hard mass measuring 170/110 mm of ovarian origin with ascites of medium abundance, the laparotomy explorer

objectivated a left ovarian tumor measuring 180/110 mm. The cancer was classified as FIGO IIC.

A total hysterectomy without annex conservation was performed with omentectomy and biopsy samples at the parietal peritoneum and epiploon. The biopsy samples taken showed no abdominal extension.

The postoperative aftermath was without particularities, the patient had left the postoperative day.

The anatomopathological study showed an aspect of papillary ovarian cystadenocarcinoma serieux de psammome type.

The extension report, which included a chest X-ray, an abdominopelvic ultrasound, and a thoracic and abdominopelvic computed tomography, showed no secondary location. The patient had received six chemotherapy treatments: cyclophosphamide, adriblastin and cisplatin.

A complete remission was obtained at the control CT.

Three years after the end of her chemotherapy, she had a nodule in the upper-outer quadrant of the right breast, measuring two centimetres in diameter, mobile relative to the two deep and shallow planes. Examination of the lymph nodes found a mobile lymphadenopathy in

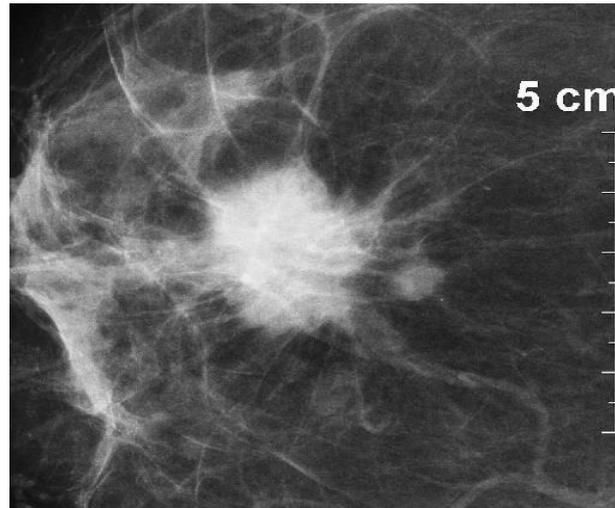
relation to the two planes, shallow and deep. Mammography objectified a high-density opacity, irregular, speculated contours, located at the right upper quadrant of the right breast, with no microcalcifications [Fig. 1] and presence of an infracentimetric node at the right axillary extension.

An enlarged tumorectomy was performed. The latter objectified a papillary serous cystadenocarcinoma of the psammoma type with neoplasm measuring 17 mm [Fig. 2]. The boundaries were healthy. The intervention was completed by homolateral lymph node curage which objectivated three invaded lymph nodes out of ten

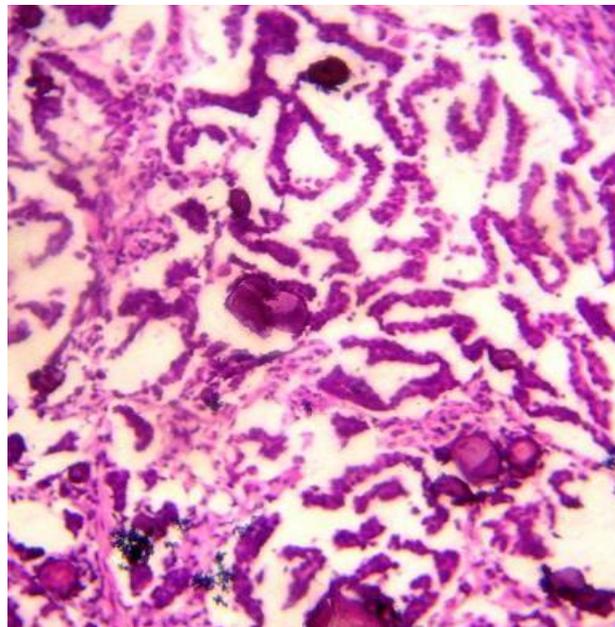
collected. The immunohistochemical study showed the absence of estrogen and progesterone receptors, BCL-2 and Her-2. The extension check-up was normal, including chest X-ray and abdominal and chest CT. Radiotherapy on the breast was performed, as well as adjuvant chemotherapy combining cyclophosphamide, adriablastine and cisplatin.

With a 14-month decline, no recurrence was noted.

In total, it was breast and lymph node metastasis from ovarian cystadenocarcinoma.



**Figure 1:** A highopacity, irregular contours, with no microcalcifications.



**Figure 2:** Seat in mammary parenchyma of an ovarian carcinoma [x100 magnification].

## DISCUSSION

Breast metastases are five to six times more common in women than in men.<sup>[3]</sup> They are the first manifestation of a primary tumour in 25% of cases.<sup>[4]</sup>

Mammary metastases from extramammary tumours are extremely rare. They account for 2% of all malignant breast lesions.<sup>[4]</sup> These metastases occur in the absence of breast cancer risk factors. They may be synchronous with the primary or metachronal tumour, manifesting

within a few months or years after the discovery of the primary tumour with a median of 65 months after the initial tumour diagnosis.<sup>[5,6]</sup> The diagnostic approach is based on the confrontation of clinical data, with the search for antecedents and neoplastic risk factors, as was the case for our patient, radiological and anatomopathological.

Serous papillary carcinoma is the most common histotype of ovarian tumour associated with breast metastases,<sup>[7]</sup> as it has been reported in 72% of cases and is generally detected within two years of the initial diagnosis of primary ovarian cancer,<sup>[8]</sup> as in our case.

Metastatic disease in the breast is more likely to occur with axillary lymph nodes, suggesting a lymphatic pathway of spread. Indeed, Le,<sup>[9]</sup> speculated that certain preferred lymph pathways, including the thoracic canal and left supraclavicular lymph nodes, could increase the risk of metastatic ovarian cancer, especially for the left breast.

According to Micha *et al.*<sup>[10]</sup> ovarian breast metastases should be treated as a systemic disease, with specific chemotherapeutic agents. Currently, the surgical management of secondary breast cancer is considered diagnostic and reserved as a palliative measure, along with radiation therapy, for patients who do not respond to systemic chemotherapy agents.

The prognosis of ovarian psammocarcinoma is relatively favourable compared to nonpsammomatous serum adenocarcinoma. The etiology of psammomas is explained by two hypotheses: the first is the formation of hydroxyapatite by tumour cells in the process of necrotic degeneration and the second is related to the effect of osteoporosis which is a protein involved in the mineralization of bone tissue and which would be manufactured by the macrophages included in tumor lesions.<sup>[11]</sup> The greater the number of psammomas, the greater the tumour necrosis and the better the prognosis.

The anatomopathologist should be informed of the existence of the primary tumor. Typically, histology can easily differentiate between metastatic and primitive lesions. Unlike primitive breast tumours, breast metastases are quite limited and seem to move breast ducts rather than from them, Breast biopsy shows cells of different type and architecture compared to breast tissue with immunohistochemical study, absence of estrogen and progesterone receptors, BCL-2 and Her-2.<sup>[12]</sup>

## CONCLUSION

Intramammary metastases from extramammary tumours are extremely rare. Primary tumors are melanomas, lymphomas, ovarian and lung carcinomas.

The ovarian origin of these mammary metastases is exceptional. This origin must be raised before any malignant breast injury, especially in the absence of

breast cancer risk factors, hence the interest of performing a surgical biopsy before surgery.

The treatment is unfortunately only palliative. It is based on surgery and chemotherapy.

**Conflict of Interest:** None.

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