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Case Report

Krukenberg's tumor: about 2 cases

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ABSTRACT

Krukenberg's tumor is a rare metastatic malignant tumor of the ovary, it represents 1 to 2% of ovarian tumors, the most frequently described primary site is the gastrointestinal tract. It is an aggressive tumor with a poor prognosis. Surgery is the treatment of choice. It consists of removal of the primary gastrointestinal cancer with bilateral adnexectomy, total hysterectomy, locoregional lymphadenectomy and omentectomy when the gastric tumor is discovered secondary to the ovarian lesion. We have collected over a period of 1 year, between April 2021 and May 2022, 2 observations of Krukenberg tumors secondary to digestive neoplasia that were followed in the department of obstetrics and gynecology of the CHU Mohammed VI Oujda. The aim of this article is to make practitioners aware of the difficulties of diagnostic and therapeutic management of this disease in order to improve its poor prognosis. In our observations, the patients certainly complained of digestive signs but it is the gynecological picture made of pelvic pain which was dominant and the main reason for consultation, the two patients were in very bad general state at their admission. The histological study is the only one able to affirm the diagnosis. On the hormonal level, CA-125 is the marker most frequently used by the authors in Krukenberg tumors. This work reconfirms the poor prognosis of Krukenberg's tumor given its insidious evolution.

Keywords: Krukenberg tumor, Digestive neoplasia, Bleak prognosis, Insidious evolution

INTRODUCTION

Krukenberg's tumor, first described in 1895 by Friedrich Ernst Krukenberg, is a rare metastatic malignant tumor of the ovary, it represents 1 to 2% of ovarian tumors, the most frequently described primary site is the gastrointestinal tract. It is an aggressive tumor with a poor prognosis.[1] Surgery is the treatment of choice whenever possible; it consists of removal of the primary gastric cancer with bilateral adnexectomy, total hysterectomy, locoregional lymphadenectomy and omentectomy when the gastric tumor is discovered secondary to the ovarian lesion. It can be done in one or two stages depending on the patient's general condition.[2] Unfortunately, this treatment can only achieve short remissions.[2,3] Palliative chemotherapy and radiotherapy have not yet been proven to be effective.[4,5]

We report in this paper, observation of two patients who consulted for a gynecological reason, in whom the diagnosis of Krukenberg tumor was retained.

CASE REPORT

Case 1

Mrs. HY, a 55-year-old woman with no notable pathological history. She was admitted to the gynaecology-Obstetrics Department for the diagnostic management of abdominal distension that interfered with breathing, associated with diffuse abdominal-pelvic pain, the history of which dated back to one month before her admission, with an altered general state and the notion of several episodes of haematemesis. On examination, the

patient presented with a performance status (PS) of 2, apyretic with a large amount of ascites preventing palpation of any deep abdominal mass or organomegaly. The radiological examinations (ultrasound and abdominal-pelvic CT scan) had found a swollen, heterogeneous left ovary (Figure 1) associated with abdominal-pelvic adenopathies, peritoneal carcinosis and abundant ascites (Figure 2). An oesophageal-gastroduodenal fibroscopy (FOGD) revealed a stage C esophagitis, congestive pangastritis, ulcerations and duodenal lymphangiectasia. The tumor antigen 125 (CA-125) was elevated to 266 IU/ml for a normal value lower than 35 IU/mL. The patient underwent an exploratory laparoscopy during which a biopsy of the left ovary, a peritoneal biopsy and multiple epiploid biopsies were performed. The pathological examination was in favor of a loosely cohesive cell carcinoma with a chastened ring cell component with epiploic and peritoneal localization (Figure 3). The patient died 1 month after the diagnosis was made.

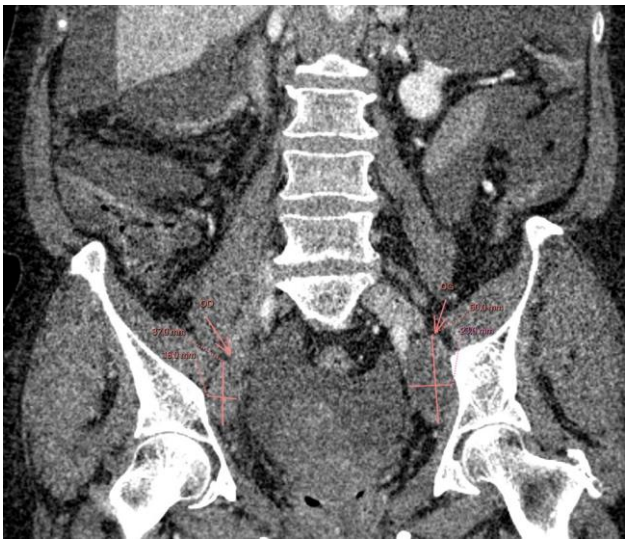

Figure 1: Swollen and heterogeneous left ovary.

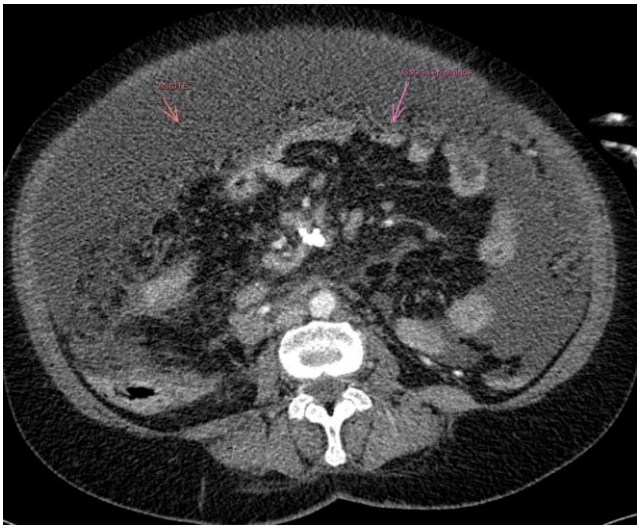

Figure 2: Pperitoneal carcinomatosis and large amount of ascites.

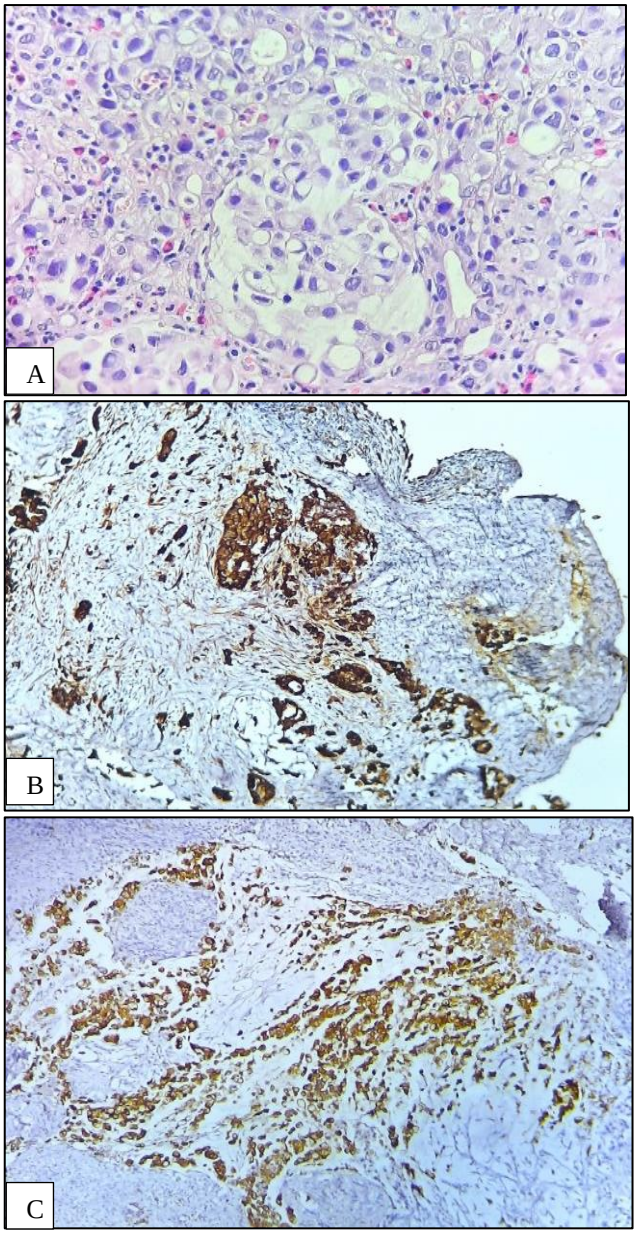

Figure 3 (A-C): Histological images reveal the presence of a carcinomatous proliferation composed of rare glandular structures and discohesive cells with clear cytoplasm, displaying a "kitten ring" appearance H and E, x400. The tumor cells express Ck7 and Ck20.

Case 2

Mrs EB, 53 years old, without any particular pathological history, hospitalized for acute pelvic pain associated with menometrorrhagia of moderate severity, atypical epigastralgia and intermittent food vomiting, evolving for 3 months with an altered general state. The clinical examination revealed a patient with a performance status (PS) of 3, apyretic with distension and diffuses abdominal dullness. Pelvic ultrasound reported two bilateral latero-uterine masses measuring respectively 95×58 mm and 80×43 mm of ovarian origin with suspicious appearance

and abundant ascites. FOGD revealed an ulcerative-bourgeous process extending from the subcardial region to the small curvature reducing the digestive lumen at this level, which had become impassable. Per endoscopic biopsy samples were in favor of a poorly differentiated gastric adenocarcinoma with independent cells of the chestnut ring type. Tumor markers CA125 and CA 19-9 were elevated to 173 and 177 IU/ml, respectively. The complementary scan revealed two bilateral latero-uterine masses of 90 mm and 80 mm of ovarian origin with tumor-like appearance, signs of peritoneal carcinosis, abundant ascites and secondary lymph node localizations. The patient underwent an exploratory laparoscopy which revealed peritoneal carcinosis, abundant ascites, with two enlarging masses on both ovaries and whitish granulations in the mesocolon and colon. During the operation, a peritoneal cytology, a biopsy of the 2 ovarian masses, and a peritoneal epiploic biopsy were performed. The anatomical-pathological analysis had revealed a bilateral ovarian, peritoneal and epiploic localization of a carcinoma with isolated cells of the kitten ring type, thus the immuno-histochemical complement was compatible with a primary ovarian tumor or a secondary localization of upper digestive origin (Figure 4). The patient was transferred to the oncology department for further management (palliative chemotherapy and radiotherapy).

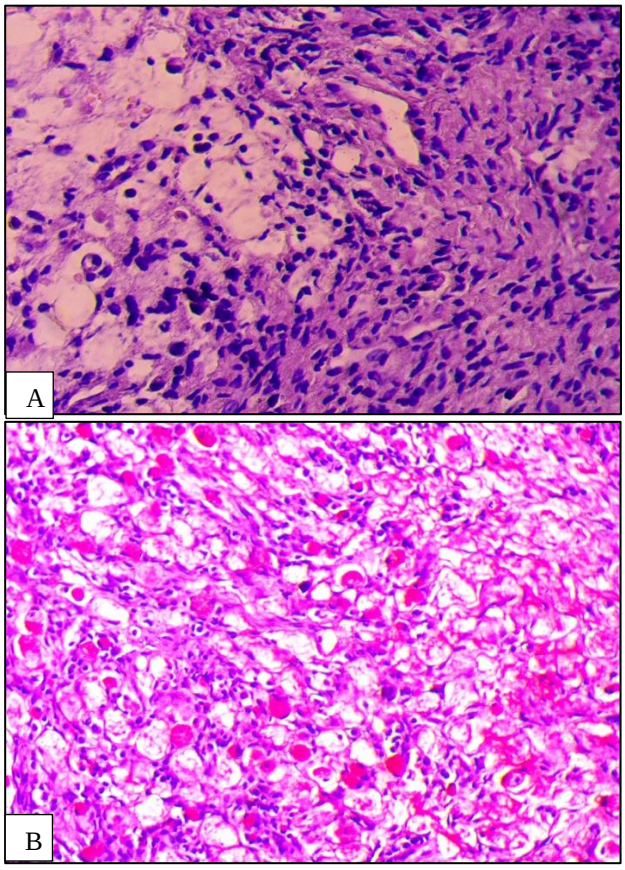

Figure 4 (A and B): PAS and PAS 2 histological images compatible with an ovarian localization of a single cell carcinoma of the kitten ring type or ovarian Krukenberg tumor.

DISCUSSION

Krukenberg syndrome is defined by the presence of uni or bilateral ovarian metastases of a mucus-secreting digestive cancer in 90% of cases; this may be gastric (70%) or colonic (14%) or pancreatic and biliary (60%), or even appendicular (1-2.5%).[3-10] An extra digestive origin (breast, thyroid, bladder, and uterus) is rare. These tumors are characterized by the presence of mucus-secreting cells in a "châton ring" at the ovarian level. First described in 1895 by the German Friedrich Krukenberg, this condition had the characteristics of a primary fibrosarcoma.[6-8] Krukenberg tumors are rare malignant tumors of the ovary, they represent 1% of ovarian tumors in general, and 5% of ovarian metastases, often bilateral and secondary to a cancer that is usually gastric, muco-secretory in 90% of cases.[11] The usual age of onset is variable, but is mostly observed in genitally active women, between 30 and 50 years of age, which is close to our patients. Krukenberg's tumors are frustrated and the specific signs are poor, so that they can be discovered intraoperatively or even be a surprise at the anatomical examination.[2,3,7,12,13] This discovery is made in 2/3 of the cases before the primary tumor, which explains their poor prognosis.[1] In our observations, the patients complained of digestive signs, but the gynaecological picture of pelvic pain was dominant and the main reason for consultation, as both patients were in very poor general condition on admission. The search for malignant cells on a sample of the ascites fluid was carried out in our patients; it allowed the demonstration, under the optical microscope, of catkin ring cells which secrete mucin, characteristic of Krukenberg's tumour.[14] The morphology described on ultrasonography and CT scan objectifies the bulky size of these tumors. Bilateral tumors are predominant.[1] Imaging cannot differentiate between a primary and a secondary ovarian tumor. It remains essential in the workup of extension.[15] Only one of our patients had both ovaries involved. Only the histological study can confirm the diagnosis. On the hormonal level, CA-125 is the marker most frequently used by authors in Krukenberg tumors. In fact it is the most frequently elevated marker, and may play a role in early detection of ovarian metastases, follow-up and even prognosis. The authors found that survival is inversely proportional to the CA-125 level.[14] All these findings are compatible and applicable to our patients. Treatment is initially surgical and consists of total hysterectomy with bilateral adnexectomy (HSTAB) with omentectomy for the ovarian tumor. The primary digestive tumor diagnosed secondarily would be treated according to its stage of evolution. The adjuvant treatment is still debated, some authors propose the combination containing products such as Adriamycin, Fluoro-Uracile (5 FU) and Cisplatin, others have even proposed an immunotherapy. The specificity of hormonal therapy has yet to be established, whereas radiotherapy is totally inoperative as shown by all the studies currently published.[16] In our series, radical surgery was not possible, as the advanced local state only allowed biopsies to be performed.[2] The evolution was fatal for one patient. This work reconfirms the poor prognosis

of Krukenberg's tumor in view of its often-insidious evolution leading to a late diagnosis and the clear lack of understanding of its etiopathogeny. Thus, we deduce that the improvement of the chances of survival is based on the systematic exploration of the ovaries in front of any digestive neoplasia. Some authors even propose prophylactic oophorectomy in women over 40 years of age who have undergone surgery for a digestive tumour. Such a suggestion seems promising in our poor socioeconomic context where clinico-radiological surveillance of patients as well as available screening modalities can be costly and demanding; however, a proposal of this magnitude requires further evaluation before adoption in the management of Krukenberg tumors.[17]

CONCLUSION

Krukenberg's tumors are always a real challenge for practitioners; hence the interest of a systematic gynecological examination before any digestive neoplasia and reciprocally, a digestive radiological and endoscopic exploration is also considered necessary before any ovarian tumor.

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