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Neuroendocrine Tumor of Uterine Cervix (Individual Case)

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Abstract

Neuroendocrine tumors of uterine cervix are rare tumors, which represent only 0.9 to 1.5% of all tumors of the cervix and which do not benefit from any consensus of management, therefore management of this localization is modeled on that of the pulmonary or digestive localization. Their prognosis is unfavorable.
We report the case of a neuroendocrine tumor of the cervix in a 24-year-old girl through which we will try to discuss the peculiarities of this histological type.

Keywords: *Uterine cervical tumor, neuroendocrine carcinoma, rare tumors.*

Introduction

Neuroendocrine carcinomas are rare tumors of the cervix that start at the expense of neuroendocrine cells. They are aggressive tumors associated with a poor prognosis. To date, there is no consensus of management suitable for this histological type. We report the observation of a neuroendocrine tumor in a young woman, at the Mohammed VI Center for Cancer Treatment, CHU Casablanca.

Observation

24-year-old patient; 2G2P, with no particular pathological history, consultant for post-coital bleeding. Gynecological examination found a budding lesion of the cervix reaching the upper 1/3 of the vagina with bilateral parametrial infiltration. The patient performed a pelvic MRI showing a tissue lesion process of 82x60x70mm with infiltration of the upper 1/3 of the vagina and respect for the walls of the bladder and rectum and the parameters (figure 1). A biopsy was performed, concluding on pathologic examination of a malignant tumor proliferation compatible with a poorly differentiated small cell neuroendocrine carcinoma. A first RCC was indicated. During her follow-up, the patient presented a pyramidal deficit syndrome with a nodule in the left breast. Spinal cord MRI revealed images suggestive of multiple vertebral metastases. Biopsy of the breast as well as that of the spine suggested secondary localization of high-grade small cell neuroendocrine carcinoma. The patient died 2 months after the discovery of the metastases.

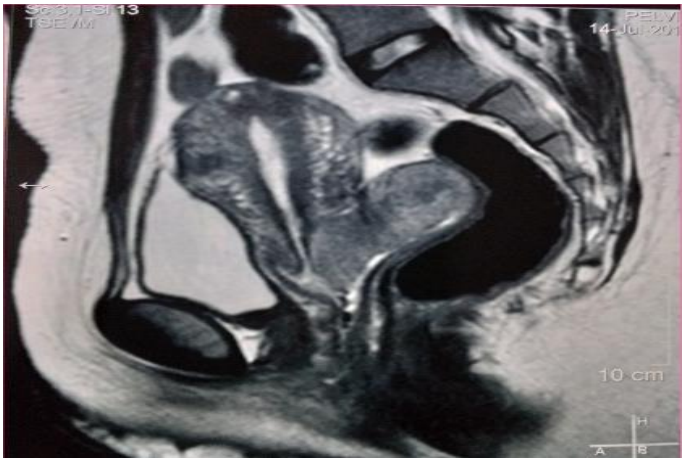

Figure 1 : MRI appearance of the lesion

Discussion

Cervical cancers are predominated by squamous cell carcinoma, while neuroendocrine tumors of the cervix represent only 0.9 to 1.5% of cases, which puts it in the register of extremely rare uterine pathologies [1]. These are aggressive tumors, the incidence of which is probably underestimated, since they are referred to by different terms in the literature such as, carcinoid tumor, argyrophilic cell carcinoma, apudoma, "oat grain" cell carcinoma, neuroendocrine carcinoma , atypical carcinoid, undifferentiated small cell carcinoma or intermediate cell carcinoma [2]. Some authors have attempted to classify this type of tumor into four subclasses, namely small cell neuroendocrine carcinomas, the most frequent, large cell neuroendocrine carcinomas and differentiated neuroendocrine tumors which are typical and atypical carcinoid tumors [3].

The median age of onset is 42 years with extremes ranging from 20 to 87 [4], our patient was 234 years old. The clinical signs remain non-specific, such as metrorrhagia caused as it was for our patient, leucorrhoea resistant to treatment, sometimes a paraneoplastic syndrome can occur, it can therefore be a cushing syndrome, carcinoid, hypoglycemia, hypercalcemia, or inappropriate secretion of anti-diuretic hormone [2].

FCU is ineffective in detecting this histological type, which explains the frequency of advanced forms at the time of diagnosis [5-6].

The diagnosis is mainly based on histology data obtained by cervical biopsy as well as the immunohistochemical study, which will make it possible to distinguish the four subclasses mentioned above. On microscopic study and immunohistochemistry, endocrine cells present a great diversity, they can be identified by Grimelius staining by the demonstration of argyrophilic or neurosecretory granulations, in immunohistochemistry by a positivity to NSE, chromogranine, la synaptophysin and antibodies to gastrin, insulin or by ectopic production of corticotropic hormone (ACTH), ßMSH, serotonin, histamine and amyloidosis [7]. Showing similarities to small cell carcinoma of the lung, neuroendocrine small cell carcinoma of the cervix and having the worst prognosis; it is characterized by high mitotic index, extensive necrosis, and massive lymphatic and vascular invasion.

The recurrence rate of this histologic type is higher than that of squamous cell carcinoma, due to the ineffectiveness of cervico-uterine smear screening. While the association with the human papillomavirus (HPV) has been shown for both types.

Moreover, according to a study carried out in 2018 on the contribution of HPV on the formation of neuroendocrine tumors of the cervix in a series of 10,575 cases of invasive tumors of the cervix; HPV DNA was detected in 85.7% of neuroendocrine tumor cases (HPV16 54.8% and HPV18 40.5%) [8].

Regarding the therapeutic management, it is based on surgery, chemotherapy and radiotherapy, the indications will be decided in a multidisciplinary consultation meeting, and will depend on the FIGO classification, lymph node staging and the presence or not of distant metastases. Several authors have studied the effectiveness of local surgery with or without radiotherapy in the early stages, Sheet et al, found a three-year overall survival rate of 16% and a five-year progression-free survival rate of 0% [9]. For Sevin et al, the latter was 36% [10]. On the other hand, a Japanese study was able to demonstrate the superiority of radical surgery as a first-line treatment over neoadjuvant radiotherapy (11). Relapses mainly hematogenous (67 to 90% of cases) and lymph node (34% of cases), a high incidence of lymphadenopathy at diagnosis (40-60%), and frequent vascular invasion, are all factors that prompted the the majority of authors associate systemic treatment with local treatment [9].

Due to early metastatic dissemination, some authors including Chang recommend neoadjuvant chemotherapy [12]. For locally advanced tumors (stages IIb-IV) or if the patient is considered inoperable, a combination of radiotherapy and chemotherapy is recommended, according to the protocol of Hoskins et al. [13]. A 2nd line of therapy is started in the event of recurrence or chemoresistance; in the event of metastatic disease or recurrence, chemotherapy, comprising either cisplatin and etoposide alone, or alternating with VAC-type chemotherapy (vincristine, adriamycin and cyclophosphamide) is indicated [14].

Conclusion

To date, there are no randomized trials to standardize the treatment of neuroendocrine tumors of the cervix, given their extreme rarity, which makes their management a little tricky.

Conflicts of interest: The authors declare no conflicts of interest.

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