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Ewing's Sarcoma of the Prostatic Substance with Metastasis

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Abstract :- Ewing's sarcoma of the prostate is a rare tumor. Treatment must be multimodal and involves surgery, chemotherapy and radiotherapy. We report an observation of an Ewing sarcoma of the prostatic compartment that was immediately metastatic in a 33-year-old patient and will discuss the diagnostic and therapeutic modalities.

Keywords: *Ewing's sarcoma; Prostate; Treatment.*

I. INTRODUCTION

Ewing sarcoma of the prostate compartment, and more generally peripheral primitive neuroectodermal tumors (PNET) is a malignant tumor of the neural crest (1). It is a rare and aggressive variant which represents 0.1% of prostate cancers. Note that this variant preferentially affects young subjects, with a predilection for bones. Given their rarity and lack of testing randomized, the diagnostic and therapeutic management of these tumors remains very difficult.

II. GOALS

The objective of this work is to identify the diagnostic, therapeutic and prognostic criteria of this tumor.

III. MATERIALS AND METHODS

The data were collected through a collated observation of the Radiotherapy department of the National Institute of Oncology in Rabat.

IV. PATIENT AND OBSERVATION

We report here the case of a 33-year-old patient who presented with Ewing's sarcoma of the prostate diagnosed by a prostate biopsy carried out in 2019 (figure 1) following an episode of acute urinary retention.

The locoregional extension assessment (CT TAP) (figure 2) revealed an aggressive process in the prostate compartment classified as T4N1M1.

The therapeutic strategy was in favor of neoadjuvant chemotherapy based on 3 courses of VAC-IE (vincristine sulfate, (Adriamycin) doxorubicin hydrochloride, cyclophosphamide, then ifosfamide and etoposide phosphate) followed by surgery.

Given that the patient was considered inoperable, the decision was in favor of conformal radiotherapy with intensity modulation by arc therapy (VMAT) with curative intent at a total dose of 46 Gy divided into 23 fractions (2 Gy/fraction). on the pelvis and 60 Gy at the level of the prostate compartment then adjuvant chemotherapy based on (VAC-IE).

2 years later, the evolution was marked by a metastatic relapse (pulmonary, lymph node and bone). Palliative chemotherapy combined with palliative radiotherapy to the spine with decompressive purposes were indicated; the patient died after the end of the 2nd CMT course.

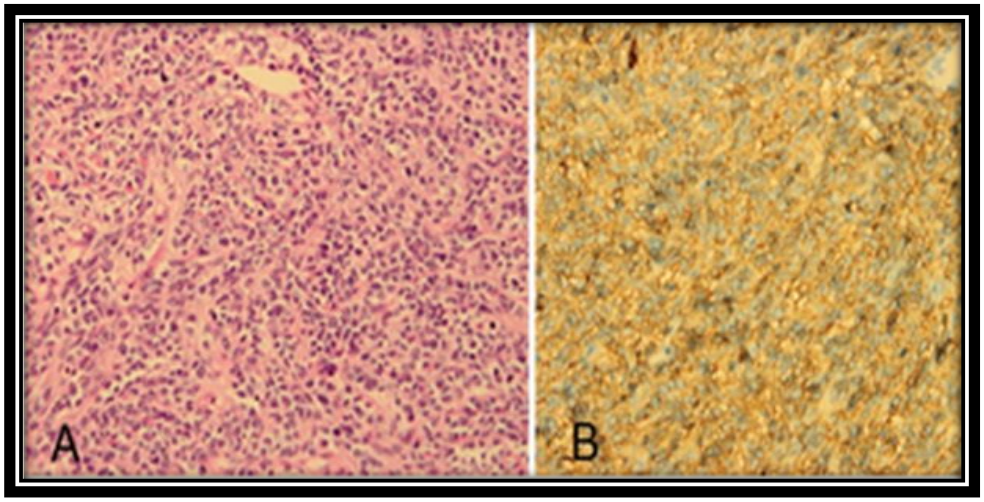

Fig 1:**HAS :**Hematoxylin-Eosin Staining: Similar Small Round Cells with Round to Oval Nuclei (original Magnification × 400); **B:** Immunoperoxidase Staining: Membrane-Associated CD99 Reactivity (CD99 Antibody, Original Magnification × 400).

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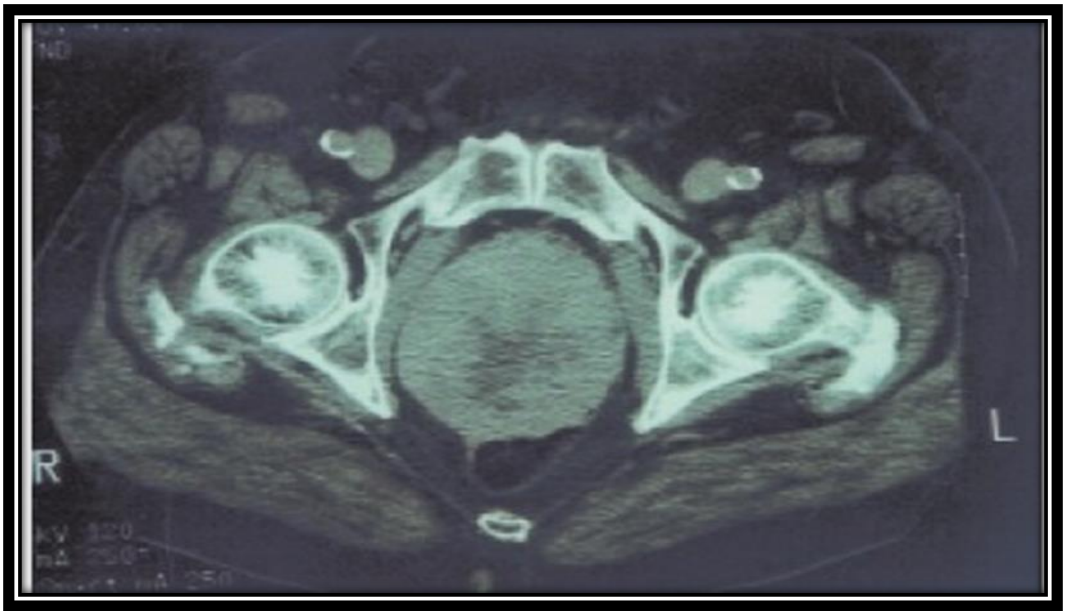

Fig 2: Pelvic CT Scan. Expansive Tumor Process Compressing the Rectum

V. DISCUSSION

Prostate sarcomas are rare tumors (0.1 to 0.2% of malignant tumors of this gland), which can affect numerous cellular contingents and concern all ages of the population, including young subjects (2).

Extra skeletal Ewing sarcoma/PNET occurs primarily in the paravertebral region, chest wall, and lower extremities and less commonly in the pelvis, retroperitoneum, or upper extremities. Exceptional sites of occurrence include several organs of the genitourinary system, as well as many other visceral sites. (1, 3)

Including our current case, 8 cases have been reported in the literature (3,4) (the average age was 27), Four of these patients complained of pain during urination, pelvic discomfort or dysuria. The PSA or other tumor-associated serum markers of all cases were normal.

MRI, CT or transrectal ultrasound can localize these tumors (5). However, MRI remains the most accurate examination. The diagnosis of these 7 cases was confirmed by biopsy.

Regarding treatment, five patients received neoadjuvant chemotherapy to reduce tumor size. Two patients received radical surgery. External radiotherapy was carried out in 3 cases. Based on these data, radical surgery and chemotherapy may be necessary to treat Ewing sarcoma/PNET. However, long-term survival data have been limited; Most patients were disease-free no more than 24 months after treatment.

VI. CONCLUSION

Ewing's sarcoma of the prostate is very rare. However, it is important to know how to think about it, particularly when there is rectal symptomatology in an elderly subject or when rapid urinary obstructive signs appear in a young subject. The anatomopathological diagnosis supplemented by an immunohistochemical study is then essential. Their therapeutic management is not currently codified and their prognosis remains very poor.

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