



Solitary Plasmacytoma of the Proximal Humerus: A Case Report at the Department of Hematology, University Hospital of Yopougon, Abidjan-Côte D'Ivoire.

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ABSTRACT

Bone solitary plasmacytoma is a rare entity characterized by monoclonal proliferation of malignant plasmocytic cells located at a bone segment, with no sign of systemic invasion. The vertebral location is the most common. The authors report a case of a woman who was 56-year-old with no medical history and addressed for a tumor of the proximal humerus. Anatomopathological examination of the segment of humerus noted an extensive diffuse plasmocytic infiltration. The absence of systemic biological signs of multiple myeloma led to the diagnosis of solitary plasmacytoma. After using the radiotherapy and chemotherapy, we obtained the complete remission without recurrence for 2 years. The interest of this study is the rarity of this localization, and to release the particular diagnostic, therapeutic and evolutive of this affection in our context.

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1. Introduction

Solitary plasmacytoma is a primary tumor characterized by monoclonal proliferation of malignant plasmocytic cells localized to a specific segment, without a proof of a systemic plasma cell proliferative disorder [1, 2]. It is a rare form, whose frequency is estimated between 5 to 10% of all plasma cell disorders [2, 3, 4]. There are two localizations: the bone marrow's plasmocytoma and extramedullary plasmocytoma [1, 5]. Bone localization usually affects the axial skeleton such as vertebra and skull [2, 3]. We report in this study, an unusual localization at the distal level of the humerus in a patient of 56 years old in order to present the diagnostic, therapeutic and evolutionary aspects in our context.

2. Case report

Mrs. B.B.F, 60, with a medical history of pesticide exposures for 5 years, was addressed by the department of Orthopedic Surgery. According to the anamnesis, the symptoms stated a year ago by a tumor of the proximal right arm, with gradually increasing in volume. This tumor was accompanied by a moderate intensity of arm pain without deterioration of the state general. She had used a traditherapy for 5 months. We noted of the evolution, the persistence of symptoms and the progression of the tumor. She had consulted the department of Orthopedic Surgery. The scanner found a tumor process of the proximal humerus with infiltration of the soft tissues. The histology of the fragment of this tumor noted a plasma cell infiltration. The patient was then referred to our department for investigation. The clinical examination noted a conscious patient with stage I of performance status of WHO.

Topographic examination noted a large swelling of right arm, painful, irregular surface shoulder associated with functional limb impotence.



Iconography I: Patients with a importante tumor of proximal right arm in clinical examination.

The rest of the exam was no particular. Biologically, the blood cell count exam noted the leukocytes at 12G/L, the hemoglobin at 10g/dl, the number of blood platelets at 156G/L, the Creatin Reative Protein was 96mg/L. The blood calcium, the creatinemia, the serum protein electrophoresis, serum and urinary immunofixation were strictly normal. The bone marrow examination noted 3% of plasma cells, and the tomography scanner noted a tumor about 10 cm in diameter of the proximal humerus without other osteolytic lesions. Because of biological signs of myeloma wich was absent and the result of histology, we retained the diagnosis of a solitary plasmocytoma according to the IMWG 2014 criteria.

After using radiotherapy with dose of 40Gy for 4 weeks associated the chemotherapy with the protocol VACD (Vincristine+Alkeran+Cyclophosphamide+dexamethasone), the tumor disappeared without recurrence for 2 years.



3. Discussion

The first classification of neoplastic monoclonal plasma cell was established by WILLIS in 1961, describing three entities: multiple myeloma, solitary bone plasmacytoma (PSO) and extramedullary plasmacytoma of soft tissues [5]. The PSO is the rarest entity whose frequency is estimated between 5 to 10% [3, 4]. In the United States and India, its frequency is estimated respectively at 4 and 4.6% of plasmocytic neoplasia [6, 7]. It affects mostly the man than women with a sex ratio of 3.2/1 [8]. The average age is 50 to 58, less frequent before age 20 [9]. This average age was similar with our patient who was 60 years old. At the topographic, the most frequent location is at the level of the axial skeleton such as the vertebra and skull in 60% of cases. localization to the fragment of the long bone is rare [10].

The case of our patient, the location was unusual and is located at external and superior part of humérus, confirmed by tomography scanner, which is the special feature of our study.

Clinically, local pain, swelling, edema, and rarely a fracture can reveal the disease [11, 12]. These symptoms were found in our patient. She was consulted late, 17 months after the onset of symptoms, so that the natural course of her illness was made to infiltrate the soft tissues. In diagnosis, only histology is the certainty test of a solitary plasmacytoma. Added to this one, the absence of systemic biological signs of multiple myeloma. In our patient, the histology of the fragment of the bone found a diffuse plasmocytic proliferation. In addition, the biological examinations of multiple myeloma were negative. Serum protein electrophoresis was normal and immunofixation of serum and urinary proteins was normal. The tomography scanner of the skull, vertebra and iliac bone had not found any lytic lésions. This morphological, histological appearance and the absence of the biological signs of myeloma confronted us with the diagnosis of a solitary plasmacytoma of the upper end of the humerus according to IMWG 2014 classification [13]. At the therapeutic level, radiotherapy associated or not with surgery is the curative treatment [14, 15]. Adjuvant chemotherapy is beneficial when the size of the tumor is superior to 5 cm, as the size of the tumor of our patient. The objective of this chemotherapy is to reduce the delay of progression to multiple myeloma [8]. This progression to multiple myeloma occurs in 2.2 years according to the authors [16]. Our patient benefited from a four-week dose of 40 Grays radiotherapy associated with 6 courses of adjuvant chemotherapy by VACD (Vincristine-Alkeran-Cyclophosphamide + Thalidomide), with total tumor remission and no recurrence or progression in 2 years.

Conclusion

We report a rare case of solitary plasmacytoma with an unusual localization, to show the importance of biopsy and interest of adjuvant chemotherapy.

Conflict of interest: none

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