Clavicle tuberculosis revealed by a lytic lesion in a child presenting with a neurofibromatosis

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Abstract

Introduction: osteoarticular tuberculosis mostly affects vertebras, the hip and the knee. This is an observation of clavicle tuberculosis initially considered as a malignant tumor in a child presenting with a type I neurofibromatosis.

Observation: A 11 year old child was seen for an indolent swelling located in the left clavicle since six months, without fever neither trauma. At the physical exam the temperature was 36.9°C; there was an indolent hard and cold swelling, fixed on the left clavicle, and no tangible adenopathy. We also noticed about twenty café au lait spots disseminated on the abdomen and the lower limbs and a scoliosis; all of that leading to suspect a type I neurofibromatosis. The biologic check up showed an inflammatory syndrome with a blood sedimentation rate of 80mm at the first hour. The left shoulder X-ray showed a lytic lesion of the clavicle and an increased radiodensity of the surrounding soft tissues. Because of the high suspicion of malignant tumor in the field of neurofibromatosis and the operatory findings, a cleidectomy was done. Clavicle tuberculosis was found at the pathological exam. The child has been treated by a combination of antituberculous drugs during 10 months, with a good evolution.

Conclusion: Tuberculosis must first of all be suspected in front of any clavicle lesion in African people, even a lytic lesion, because of the endemic evolution of the infection in this region.
These granulomas are variable in size and some of them contain a central necrosis. A part from the epithelioid and giant cells, there are lymphocytes and some rare neutrophil cells. There is no sign of malignant process. In conclusion the histological aspect is the one of bone tuberculosis”. The child received a combination made of four antituberculous drugs during 2 months, followed by a combination made of two drugs during 8 months. After one month of treatment, the fistula of the operatory wound was resorbed. The blood sedimentation rate had decreased to 10 mm at the first hour. After a management of 18 months, the movements of the left shoulder were quite normal.

**Figure 1**
Tuberculosis of left clavicle mimicking malignant lesion.

**DISCUSSION**

Osteoarticular tuberculosis is rare. It represents only 1 to 5% of extra-pulmonary forms [1]. Despite that fact, its raise is crescent, even in developed countries [1]. The predilection yields are children, old people, poverty and immunodeficiency [1]. It mostly locates in vertebras, the hip and the knee. The clavicle localisation is exceptional [5, 6]. Eleven cases have been reported in the world since 30 years and children were concerned in only four of them [5]. The diagnosis is rarely suspected before biopsies because tumors are much more frequent than infections in this bone [6]. Concerning our child the diagnosis of tuberculosis was done by the histological exam, it shows an epithelioid and giant-cell granuloma, containing a central necrosis. If the diagnosis is quickly done the treatment is medical: the intake of a combination of four antituberculous drugs during 2 months, followed by a combination of 2 antituberculous drugs during 8 to 10 months. The response to the treatment is controlled clinically by the decreasing of the swelling, and biologically by the normalisation of the blood sedimentation rate. The bone reconstruction must be controlled on the X-ray. The surgery is only indicated for bone biopsies, or to discharge cold abscesses and then inhibit the progression of the infection [7]. The occurrence of a lytic lesion in the field of neurofibromatosis leads us to strongly suspect a cancer, mostly because this disease could lead to malignant tumours [8]. That is why a cleidectomy and an excision of muscles involved were done. The same attitude was adopted by Fang and al. who reported a case in a patient under dialysis [6]. We think, as Abdelwahab, that any atypical bone lesion in a black patient must be considered like a tuberculosis lesion till no evidence [9]. This is mostly true for our child because he leaves in an endemic region.

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**References**

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