Neuroblastoma is a malignant tumour derived from the sympathetic nervous system. It is the second most common tumours of the child. The signs depend on the location of the tumour, mostly in the abdomen, behind the peritoneum, along the spine, or at the level of the adrenal gland, just above the kidney. The metastases should be preferentially sought in the bone marrow and bone.

Acute leukaemia in its bone pain presentation may be a differential diagnosis with neuroblastoma in absence of primary location of the tumour.

Cytology may shows clumps of neuroblastoma cells.

We report the observation of a 3 years old child having consulted for long fever and bone pain. Clinical examination did not found tumour syndrome, bleeding or infection. The biological report showed microcytic hypochromic anaemia (Hb: 8) and thrombocytosis (600,000 / mm3) with a biological inflammatory syndrome. The toll radiation (chest, pelvis, and spine X-rays, abdominal and cardiac ultrasounds) was normal. A bone marrow smears in connection with the exploration of a fever-long course, found 15-20% of cell infiltration of average size, high nuclear/cytoplasm ratio, a grainy basophilic cytoplasm, in a kernel chromatin intermediate without nucleolus like lymphoblastic cells. The diagnosis of acute leukaemia had been discussed and confirmed by immunophenotypic features: B cell population estimated at 36% expressing HLA-DR, CD19. The karyotype was normal. The diagnosis of acute lymphoblastic pro B leukaemia was made. The patient was treated according to the EORTC 58951. The trend is marked by a clinical, cytological and immunophenotypic remission after induction treatment. The bone marrow aspirate of day 15 did not found more blast cells. The post aplastic chemotherapy was of short duration and without incidents. But seven months later, before
starting the maintenance treatment, there has been a relapse early. Attack chemotherapy was prescribed and the patient has been proposed for bone marrow transplant.

A thoraco abdominal computed tomography conducted as part of a review hospitalized showed adrenal mass.

The diagnosis of neuroblastoma was mentioned. The NSE (non specific enolase) and urinary VMA (vanyl mandelic acid) were high and the ferritin too.

**DISCUSSION**

This observation illustrates the differential diagnosis problem between acute lymphoblastic leukaemia and neuroblastoma. The main differential diagnoses refer to an acute leukemia in childhood in its bone presentation are articular diseases (rheumatoid arthritis or juvenile chronic arthritis), Ewing sarcoma, rhabdomyosarcoma and stage IV neuroblastoma.

In our observation musculoskeletal diseases were eliminated before the normal radiological assessment and the bone marrow smear showed cells looking with a blast. Immunophenotyping was in agreeing of a pro B acute lymphoblastic leukaemia.

But the presentation was atypical. Anemia was microcytic with thrombocytosis, aplastic period of short duration without incident, and relapse in a form of relatively favorable prognosis (normal karyotype, cytological remission at day 15). Bone marrow showed infiltration with an atypical aspect of the chromatin. Immunophenotypic data had confirmed our diagnosis.

The expression of markers B during neuroblastoma is not much reported in the literature. In 1991, Mandel et al reported the existence of a people with spinal B expression of HLA-DR, CD19, CD10 and CD20 two infants with stage IV neuroblastoma (2); Defining them as a cell population mimicking a LAL. The same team has studied the expression of CD10 in neuroblastomas giving them positive predictive value (3). Ebener and al had also reported the expression of markers on B neuroblastoma cell lines (4).

Here a stage IV neuroblastoma with a very poor prognosis has been misdiagnosed. It has wrongly been considered acute lymphoblastic leukaemia. Biological results must be considered in its clinical context. Cytology and clinical presentation was atypical, even evolution, especially with short aplastic period without incidents and orbital ecchymosed. Did bone marrow biopsy justified?

It was a neuroblastoma without tumour at diagnosis. The adrenal mass was not seen in ultrasound exam, but it operator dependent, and a did a computed tomography showed this mass?

Chemotherapy products received for treatment of acute lymphoblastic leukaemia are the same of neuroblastoma but with different sequences except of cis-platinum that is administrated only in neuroblastoma.

**CONCLUSION**

The differential diagnosis of an acute lymphoblastic leukaemia in its bone presentation must be discussed. The presence of B markers in an atypical acute lymphoblastic leukaemia must raise the diagnosis of neuroblastoma. Search of possible rosettes in cytological exam, determination of NSE and even a histological examination must be requested in doubt. Each review must be interpreted in its context and hence the interest of a collaboration between biologists and clinicians.

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