TÍTULO: "When Osteomyelitis Is Not Osteomyelitis: A Paediatric Case of Langerhans Cell Histiocytosis"

IMPORTANCIA DEL CASO: Langerhans cell histiocytosis (LCH) is a rare clonal disorder with heterogeneous clinical manifestations, ranging from isolated bone lesions to multisystem disease. Although skeletal involvement is common in children, craniovertebral and calvarial lesions with intracranial extension are uncommon and may complicate diagnosis. We report a paediatric case of LCH with atypical skeletal involvement, initially misdiagnosed as chronic multifocal non-bacterial osteomyelitis, highlighting the diagnostic challenges and the role of neurosurgical intervention.

DESCRIPCIÓN DEL CASO CLÍNICO: This case describes a 2.5-year-old child who was initially admitted to another institution for investigation of chronic multifocal non-bacterial osteomyelitis. At the age of 12 months, the patient presented with left-sided torticollis and cervical pain. Magnetic resonance image (MRI) revealed lesions involving the subaxial cervical spine, namely left atlanto-axial involvement and midline atlanto-odontoid lesions, in addition to involvement of costal arches and the iliac bone. Based on a presumptive diagnosis of osteomyelitis, the patient underwent six weeks of antibiotic therapy. Eight months later, there was recurrence of symptoms, with new left-sided torticollis. New MRI showed a calvarial lesion, with extraosseous extension and an extra-axial intracranial soft-tissue component.

To establish a definitive diagnosis, surgical excision of the calvarial lesion was undertaken. The lesion was completely removed by craniectomy. Another craniotomy was performed next to the lesion site, in order to perform a *split calvarial bone graft* cranioplasty. Histopathological analysis confirmed the diagnosis of LCH. The patient started induction chemotherapy with vinblastine and prednisolone. The patient is currently undergoing maintenance treatment.

LECCIONES APRENDIDAS O IDEAS CLAVE: This case underscores the diagnostic complexity of LCH when presenting with atypical and multifocal skeletal lesions, particularly in very young children. Early neurosurgical intervention was pivotal in achieving histological diagnosis and enabling timely initiation of systemic therapy. Awareness of LCH as a differential diagnosis in recurrent or refractory osteolytic lesions is essential.