Unusual presentation of unilateral maxillary sinusitis in a 3-year old boy

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Introduction
Acute lymphoblastic leukaemia (ALL) is the most common cancer diagnosed in children. ALL presenting as a leukemic mass in the paranasal sinus is uncommon. Therefore, we present the case of a 3-year old boy with a leukemic mass in the right maxillary sinus.

Results
A 3-year old boy was referred to the Otorhinolaryngology department with progressive unilateral nasal obstruction and rhinorrea for 5 weeks.

There was an infra-orbital oedema without fever. On examination there was a unilateral, firm, non-painful suborbital swelling. Nasal examination showed right-sided congestion without purulent secretions. Tonsils were normal and there was an asymmetry of the soft palate. Computer tomography (CT) and magnetic resonance imaging (MRI) revealed a large mass in the right maxillary sinus with bony destruction and invasion of the buccinator compartment.

The differential diagnoses of a paranasal sinus mass in children are rhabdomyosarcoma, neuroblastoma, juvenile angiofibroma, leukemia, or lymphoma.

Following imaging a full blood count was done by the general practitioner. Hemoglobin was 11.8 g/dL, total leukocyte count 5030/microL with 15.2% blast cells, and platelet count 11.5.10E9/L.

Eventually, cytological examination of a bone marrow aspirate confirmed the diagnosis of ALL with 77.6% of lymphoblast cells.

The patient was treated with a combination of chemotherapy, more specifically cyclophosphamide and methotrexate.

Conclusion:
In a child presenting with a (rapidly) growing paranasal sinus mass, a leukemic mass should be kept in the differential diagnosis. For early diagnosis of ALL, radiological imaging, peripheral blood smear along with bone marrow aspirate should be performed.