Premaxillary abscess without bony erosion: an unusual complication of pediatric acute maxillary sinusitis

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This is the first reported pediatric case series of children with premaxillary abscesses complicating acute maxillary sinusitis. This rare complication has an unusually high risk of surgical drainage failure suggesting that close clinical monitoring and early imaging are warranted along with aggressive surgical treatment.

Objectives
Report premaxillary abscesses as an unusual complication of acute maxillary sinusitis in children. Describe the clinical, bacterial and imaging findings, as well as the therapeutic strategy and the outcomes.

Material and Methods
Retrospective case series of all patients referred to two Otolaryngology tertiary referral centers for acute maxillary sinusitis associated with a premaxillary abscess between 1999 and 2017. Medical history, clinical presentation, biological and imaging data, treatment modalities and outcomes were studied.

Results
10 patients were included (8 boys/2 girls). The mean age was 10±4.2 years (range: 2.5-17)

Clinical presentation:
All patients presented with fever, nasal discharge and premaxillary edema.

Radiological presentation:
Contrast-enhanced computed tomography revealed in all cases complete opacity of the maxillary sinus without any erosion of the sinus bony walls, and abnormal fluid collection with rim enhancement extending along the lateral wall of the nasal fossa reaching the premaxillary region. The pus collection extended posteriorly to the parapharyngeal space in three cases.

Unusual bacteriological findings:
- Streptococcus was the most frequently encountered bacteria
- 4 streptococci belonged to the anginosus group which is known to cause invasive pyogenic infections

Treatment:
All patients received broad spectrum intravenous antibiotics and patients with a premaxillary abscess diameter greater than 10 mm were surgically drained (n=9;90%).

High rate of surgical failure:
Recurrence of the premaxillary abscess was observed in seven (78%) requiring a second procedure, and even a third procedure in three patients (33%).

All patients were cured without any long-term sequelae

AGGRESSIVE STRATEGY DURING THE FIRST SURGICAL PROCEDURE AND SURVEILLANCE

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