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An Uncommon Case of Pott's Puffy Tumor in a Pediatric Patient

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Description

Pott's Puffy Tumor, characterized by subperiosteal abscess formation and frontal bone osteomyelitis, is a rare complication of sinusitis. While it typically occurs in older children and adolescents, we present an unusual case of Pott's Puffy Tumor in a 9-year-old pediatric patient. This report highlights the atypical presentation, diagnostic challenges, and successful surgical management of this condition in a young child.

Pott's Puffy Tumor (PPT) is an uncommon complication of frontal sinusitis characterized by a subperiosteal abscess formation and osteomyelitis of the frontal bone. It typically affects older children and adolescents, with a reported male predominance. Pediatric PPT cases are rare, and the condition poses diagnostic challenges due to its unusual presentation and potential for severe complications.

A 9-year-old male presented to our pediatric department with a one-week history of persistent fever, frontal headache, and progressive swelling over the forehead. The patient had no history of significant trauma or sinusitis. On physical examination, there was an indurated, tender swelling over the frontal region, along with signs of local erythema. There were no signs of neurological deficits, and the patient's vital signs were stable.

Initial laboratory investigations revealed an elevated white blood cell count (14,500/μL) and an increased Erythrocyte Sedimentation Rate (ESR) of 60 mm/h. A Computed Tomography (CT) scan of the head demonstrated a frontal subperiosteal abscess with overlying soft tissue swelling and frontal bone osteomyelitis.

The patient underwent surgical drainage and debridement under general anesthesia. Intraoperatively, purulent material was evacuated from the subperiosteal space, and frontal bone debridement was performed. Culture of the purulent material yielded *Staphylococcus aureus*, sensitive to common antibiotics.

Postoperatively, the patient received intravenous antibiotics for two weeks, followed by a four-week course of oral antibiotics. He showed significant clinical improvement, with resolution of the fever, headache, and frontal swelling. A follow-up CT scan showed resolution of the abscess and osteomyelitis.

Discussion

Pott's puffy tumor is thought to occur as a result of contiguous spread of infection from the frontal sinus to the frontal bone, leading to subperiosteal abscess formation. The presentation often includes fever, headache, and local swelling over the forehead. In older children and adolescents, the diagnosis is typically suspected based on clinical presentation and confirmed through imaging studies. Pediatric cases of PPT are rare and pose unique challenges. Children may not always exhibit classic symptoms and findings. Our case emphasizes the need for a high index of suspicion in diagnosing PPT in pediatric patients, particularly when presented with unusual symptoms such as a fever, headache, and local forehead swelling.

The standard treatment for Pott's puffy tumor involves surgical drainage and debridement, followed by appropriate antibiotic therapy based on culture and sensitivity results. Prompt diagnosis and intervention are difficult to prevent further complications, such as intracranial extension and frontal bone destruction.

Conclusion

Pott's Puffy Tumor is an unusual but difficult condition that demands timely recognition and intervention to prevent severe complications. Our case illustrates the successful management of PPT in a pediatric patient, highlighting the importance of considering this diagnosis in the evaluation of unusual forehead swellings and other non-specific symptoms.

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