Pott’s puffy tumor

A condition still to be considered

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ABSTRACT

In the era of antibiotics, Pott-Puffy Tumor (PPT) is a rarely recognized entity. An 11-year-old girl presented with headache, fever for one week, and frontal swelling for 3 days. On examination, she was febrile, congested nasal mucosa with yellowish nasal discharge and frontal swelling; tender not fluctuating with normal eye mobility. Computed tomography (CT) scan of brain and paranasal sinus revealed opacity of maxillary, left ethmoid, frontal sinus opacity and epidural collection in the right frontal region with post contrast enhancement. An extracranial superficial swelling with fluid collection at the same level of epidural collection. The patient underwent bilateral antral washout and left frontal sinus trephination, which had resulted into a complete resolving of symptoms and an avoidance of further invasive surgical intervention.

Case Report. An 11-year-old girl presented to the emergency department with headache, fever for one week and frontal swelling for 3 days. There is no history of recent upper respiratory tract infection, head trauma or neurological deficit. The patient had been treated with antibiotics prior to presentation with no improvement. On examination her temperature was 39.5°C. The nose was congested with yellowish nasal discharge bilaterally and frontal swelling was tender, not fluctuating with normal eye mobility. There are no diplopia, visual impairment or neurological deficits. On admission, non-contrast CT scan of the brain and paranasal sinus revealed opacity of maxillary sinuses left ethmoid and frontal sinuses opacity with soft tissue swelling in frontal region just in front of frontal sinus (Figure 1 & 2). The patient was started on cefuroxime and metronidazole antibiotics empirically. Her fever kept fluctuating and frontal swelling increased. On the second day of admission, CT scan of brain and paranasal sinuses with contrast was repeated, which showed the previous findings in paranasal sinuses and epidural and extracranial collection with post contrast enhancement (Figure 3). The patient underwent bilateral antral washout and left frontal sinus trephination. Postoperatively, she had a dramatic improvement, her fever settled down and swelling decreased gradually. Consultation of neurosurgeon had been made regarding epidural collection and he recommended to continue the same management. Three months later, the patient was seen in a clinic with repeated CT scan, which revealed a small epidural lesion but there is no evidence of collection and the superficial extracranial swelling regressed.
Pott's puffy tumor... Alsanosi & El-Sayed

Computed tomography scan is the most definitive modality for diagnosis of PPT, and when combined with contrast, it is the best choice for visualizing both intracranial as well as extracranial complications.

Management of PPT requires a multidisciplinary approach. The liberal use of antibiotics alone may mask the clinical features that herald the onset of intracranial complications. Different surgical approaches include frontal trephine, antral washout, and external frontal frontoethmoidectomy, combined frontal sinus trephine and endoscopy with or without placement of a stent in the frontonasal duct and functional endoscopic sinus surgery with opening of the frontonasal duct (positive and negative) stenting has been reported.

In our case, although the patient had developed an early intracranial but extradural collection, however, early intervention in the form of antral washout and left frontal sinus trephination with proper antibiotics were adequate to avoid further deteriorations and a need for invasive surgical procedure.

In conclusion, although PPT is considered a rare entity in the era of antibiotics, high index of suspicion, early diagnosis and management could save patients from serious sequelae and necessity of invasive surgical intervention.

References


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