CASE REPORT

A child with swelling between the eyes

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Mohamad I, Soleh MN. A child with swelling in between the eyes. Malaysian Family Physician 2013;8(2): 56-7

Keywords:
nose, infection, abscess, cavernous sinus

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Case History

A 10-year-old girl presented with a one-week history of swelling over her nasal bridge. The swelling began with a small pea-sized lesion that gradually increased in size over the one-week period. It was associated with throbbing pain and intermittent low-grade fever. Visual field and examination of extraocular muscle movement were normal. Although she was examined by a general practitioner and was prescribed oral antibiotics, the symptoms persisted.

Question

1. What are the two most likely diagnoses?
2. What are the distinguishing features of this condition in the history?
3. Which procedure should be performed before considering any surgical intervention?
4. What is the principle of treatment?

Answer

1. Nasal bridge abscess should be the provisional diagnosis. Based on the location, differential diagnosis includes nasal encephalocoele or an infected dermoid cyst.
2. Important features of this condition in the history include duration of symptoms, presence of acute inflammatory symptoms, and nasal obstruction. Acute symptoms such as fever and painful swelling, which increase within a week, tend to be more of infection in origin. It may start off with small acne or trauma secondary to scratch. Even though the location is the same, encephalocoele is present since birth as it is a congenital anomaly resulting from herniation of the brain tissue through the anterior skull base defect.[1]
3. Nasal endoscopy should be performed to look for an abnormal mass in the nasal cavity. which suggests the presence of an encephalocoele. Nasal bridge abscess usually affects the superficial skin over the dorsum of the nose and rarely has a communication tract into the nose. In this case, detailed rigid nasoendoscopy is normal. If encephalocoele is suspected, magnetic resonance imaging of the brain and paranasal sinuses is indicated. In addition, the location of the abscess itself is on the 'dangerous triangle' of the face. The area covered is from the corners of the mouth to the bridge of the nose, including the nose and the maxilla area. The venous system in this area is drained by the facial vein, which directly connects with the cavernous sinus.[2] Although rare, it is possible that retrograde infections spread

from affected area to the brain. Owing to the close proximity of the swelling to the ocular region and the possibility of cavernous sinus involvement, physical examination of the ocular movement must be carried out.

4. After confirmation of nasal abscess, the collection needs to be drained. Even though an open incision and drainage (I&D) constitutes the primary therapy for the skin and soft tissue abscess, it is always linked with disfigurement and painful experience.[3] As the collection of abscess in this case involved the nasal bridge, which is the central part of the face, aspiration was preferred over the conventional I&D. The procedure was performed in the clinic under local anaesthesia. About 8 mL of thick pus was aspirated, and the swelling collapsed. She was restarted on a 1-week course of oral antibiotics (e.g., amoxicillin and clavulanate acid), which cover gram-positive bacteria. The most common organism in this type of superficial skin infection is *Staphylococcus aureus.* Cloxacillin is usually used for abscess, although there is a randomised controlled trial that suggests antibiotics may not be needed for most superficial skin infections.[4] However, in this particular case, antibiotics were prescribed in view of the 'dangerous triangle' of the face involved, and intracranial complication was anticipated. As the patient was treated earlier with a course of antibiotics by a general practitioner, which we identified later as cloxacillin, we opted to use a broader spectrum of antibiotics with a twice-daily dose to improve the compliance, especially in children.

References

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