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CASE REPORTS

UNILATERAL NASAL DISCHARGE IN CHILDREN - WHAT SHOULD WE THINK?

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ABSTRACT

Introduction: Nasal vestibulitis is a localized infection of the nasal vestibule, mainly caused by Staphylococcus aureus.

Case Presentation: A healthy, 18-month-old girl presented with a 3-day history of unilateral discharge in the right eye and brownish rhinorrhea with visible dry blood only in the right nasal cavity. The anterior rhinoscopy showed unilateral hematic remains, preserved nasal permeability and no visible foreign body. The diagnosis of nasal vestibulitis was made and she was treated with topical and systemic antibiotics, with no sequelae.

Conclusion: Nasal vestibulitis is a common condition that should be considered in all age groups. Serious complications can occur, making a timely diagnosis and adequate treatment crucial

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KEYWORDS

nasal vestibulitis, pediatrics, nasal discharge.

Case Report

An 18-month-old girl, healthy, presented in urgent care with a 3-day history of unilateral, white-yellowish discharge in the right eye and brownish rhinorrhea from the right nasal cavity. She had epistaxis from the right nasal cavity, which had spontaneously ceased when she arrived at the ER. There was no history of foreign body insertion given by the parents. No other symptoms were identified, namely, no cough, difficulty breathing or fever. The child had an excellent overall appearance, normal respiratory rate and peripheral oxygen saturation. She had several maculopapular lesions on the face, approximately 5 mm in diameter, with no other lesions elsewhere on the body. There was visible dry blood only in the right nasal cavity (Figure 1). She had a normal pulmonary and cardiac auscultation. Due to the unilateral findings and high risk of foreign body nasal insertion at this age, an anterior rhinoscopy was performed which showed hematic remains in the right nasal cavity with blood clots, preserved nasal permeability and no visible foreign body. There was inflammation of the right nasal cavity with swelling and redness of the mucosa. The diagnosis of right nasal vestibulitis was made and the child was treated with oral flucloxacillin and topical fusidic acid, with full resolution of the symptoms.

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Figure 1. An 18-month-old child at admission showing an excellent overall appearance, maculopapular lesions on the face, smaller than 0.5cm in diameter and visible dry blood on the right nasal cavity, with no other alterations.

Discussion

The main differential diagnosis of unilateral nasal discharge is foreign body insertion. Nasal vestibulitis is a localized infection of the skin of the nasal vestibule, caused mainly by *Staphylococcus aureus (S. aureus)*.[1,2] The mucosa of the nasal vestibule is filled with hair follicles and S. aureus is a common

commensal, able to infect if a portal of entry is present.[3] Symptoms are usually unilateral, which in children may erroneously lead to a foreign body insertion diagnosis.

Nasal vestibulitis may be secondary to topical minor trauma such as nose picking, hair plucking, excessive nose blowing, topical nasal steroid therapy and foreign body insertion or viral infections, such as herpes simplex and herpes zoster.[1,2] In this case, considering the age of the patient, a likely cause is nose-picking.

Patients usually complain of pain, redness and swelling of the nasal tip and vestibule. Yellow crusting is a typical finding.[2] Epistaxis and systemic symptoms, namely fever, are not common findings.[2,3]

When left untreated or treated inadequately, nasal vestibulitis may progress to cellulitis and intracranial complications.[2] Since the veins draining this area of the face are valveless and directly join the cavernous sinus, there is a potential risk of spreading the infection.[1] In a series of 118 cases, there were no described cases of intracranial complications, thus adequate treatment seems to be enough to prevent them.[2] Despite the risk of serious complications, there are few published cases reporting them. Nevertheless, there is a report of a rare case of an 11-year-old child, previously healthy, who progressed from untreated nasal vestibulitis to septal abscess and further leading to sinusitis, bilateral orbital cellulitis and intracranial complications. Later he had a good recovery after aspiration of pus and medical treatment with antibiotics.[4] This reinforces the importance of a timely diagnosis and adequate treatment of this pathology.

Most cases can be treated as outpatients with topical or an association of topical and systemic antibiotic.[1,2,3] The most commonly isolated agent is methicillin-sensitive S. aureus (MSSA), making penicillin a good first-choice therapy.[2]

In this clinical case, another possible diagnosis was foreign body insertion in the nasal cavity. Being more common between the ages of 0 and 4, it can sometimes lead to complications such as epistaxis and vestibulitis. Common symptoms of nasal cavity foreign bodies are mucous-purulent discharge and foul odour.[5] The presence of these symptoms in young children, especially if with a unilateral presentation, makes it mandatory to exclude this diagnosis. Epistaxis and nasal obstruction are also possible symptoms.[5]

Lastly, in persistent nasal vestibulitis, neoplastic diseases should be excluded.[1]

Compliance with Ethical Standards

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Conflict of Interest None

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