Foreign bodies of the nose are relatively frequent in pediatric population, while in the adults, they are usually seen in disturbed persons. Overlooked nasal foreign bodies may be singled out as a special entity. They become rhinolites over time with latent period of several decades.

Our paper illustrates an overlooked foreign body in the nose – i.e. encrusted plastic bead which, after the asymptomatic period of 48 years, induced the unilateral mucopurulent and ichorous secretion from the nose. Rhinolite should be suspected if radiological diagnostics detected calcified mass in the nose together with unilateral nasal symptomatology. Surgical removal of rhinolite results in complete management of such problem.

This case indicates the significance of medical history data and examination of nasal cavity in any adult patient with unilateral nasal symptomatology which is refractory to conservative treatment. Computerized tomography of paranasal sinuses is an important adjunct diagnostic tool in indefinite cases. Nevertheless, it often happens that only the extraction of rhinolite indicates the diagnosis that is not usually suspected in adult persons.

Key words: foreign body, nose

INTRODUCTION

Overlooked nasal foreign body that becomes rhinolite in time is a special entity. It is often detected accidentally after a long asymptomatic period, usually by radiologic diagnostic while planning the surgical intervention of the oral cavity. Similarly, overlooked foreign body in adults may mimic the intranasal lesion or fracture of the nasal bones.

OBJECTIVE

Our study reports an overlooked foreign body in the nose – encrusted plastic bead which, after the asymptomatic period of 48 years, induced the unilateral mucopurulent and ichorous secretion from the nose.

CASE REPORT

Female patient M.D., 51 years old, was admitted to the Institute of Otorhinolaryngology and Maxillofacial Surgery, Clinical Center of Serbia in Belgrade, due to several episodes of sero-mucopurulent and ichorous secretion from the nose, as well as discharge running down the posterior pharyngeal wall. The onset of disease was six months earlier, and the secretion repeated only from the left nasal cavity.

She was previously treated in the primary health care institution by antibiotic and symptomatic therapy. As the episodes of unilateral nasal secretion repeated, computerized tomography of paranasal sinuses was indicated and the patient was referred to our institution on account of detected intranasal lesion.

On admission, the patient was afebrile and in good general condition. Laboratory test results were within physiological limits, and pathogenic microorganisms were not recovered from the nasal and throat swab.

The anterior rhinoscopy revealed the endonasal hypemia of mucosa in the left nasal cavity, minor edematous mucosa of the lower nasal conchae and nasal septum with deviation to the right.
Computerized tomography (CT) with i.v. contrast of the paranasal sinuses (PNS) showed nonhomogenous oval-round structure with marked hyperdense rim, situated in the lower nasal meatus to the left and more anteriorly on the floor, which lifted the mucosa up and was in close contact with bony walls, cartilage of the septum and internal medial wall edge of the left maxillary sinus.

This structure had the morphological characteristics of rhinolite, but differential diagnosis could not definitely distinguish it from other intranasal lesions (figures 1 and 2).

Since the patient could not tolerate rigid endoscope in spite of local anesthesia, we opted for nose examination under general anesthesia.

The examination of the nose by rigid endoscope in general anesthesia showed tumefaction resembling the rhinolite, which was found in the left lower nasal meatus at distance of 4 cm from the opening. It was in close contact with the floor and lateral nasal wall, without reaction of the adjacent tissue. Tumefaction was solid to the touch of the pincers; it was removed en block without any resistance and with minimal bleeding. Only upon scraping the lime salts off from its surface, it was discovered that it was the question of a foreign body – encrusted, round and hollow plastic blue-colored bead of 8x8 mm in diameter (figure 3).

The extraction of the foreign body resulted in complete resolution of symptoms. After subsequent information on patient’s history, we learnt that she, in her age of 3, was taken by her mother to see doctor for suspicion of having pushed some foreign body into the nose, but regular examination failed to detect anything.

**DISCUSSION**

Nasal foreign bodies are frequent in pediatric population because children tend to push various things into the nose out of curiosity. Children are commonly taken to see doctor by their parents with positive history on foreign body in the nose. The right angle hook (loop) or pincers are usually used for extraction under local or general anesthesia. Sometimes, the extraction is attempted by simple "blowing the nose" with the opposite nostril closed, by means of positive pressure, magnet, “parent’s kiss” and thin balloon-catheter.

Foreign bodies of the nose are much rarely seen in adults, usually in mentally disturbed persons, neurological disorders with velopharyngeal insufficiency, trauma, vomiting or careless "picking of nose" using various objects.

Overlooked foreign body of the nose may be singled out as a separate entity. It represents the exogenous focus appropriate for sedimentation of calcium salts and magnesium over time, forming the rhinolites.

Besides exogenous, there are rhinolites of endogenous origin. Their foci consist of blood clots, dried secretion, bony and cartilaginous fragments and, sometimes, ectopic teeth. Senkal A.H. and assoc. described a very rare case of 23-year old patient with unilateral nasal obstruction, secretion and nasal deformity as a result of intranasal ectopic tooth. Shaw L.C. reported a case of 61-year old woman with unilateral obstruction and fetid secretion from nose as well as toothache over the period of 50 years. The cause of nasal symptomatology was the tooth fragment which had been intranasally dislocated during the operation for cleft palate in her childhood. Available literature has also reported the cases of rhinolites found in maxillary sinus.

Foreign bodies may reach the nasal cavity via extranasal pathway. Maitra S. and assoc. described a case of nasal foreign body in an adult person, which upon the open fracture imitated the fracture of nasal bones. They emphasized the significance of obtaining precise history data and careful wound exploration in the open nasal injuries.

Etiopathogenesis of rhinolites has not been fully clarified. Some authors think that lower air circulation at the site of foreign body impaction facilitates sedimentation and mineralization of salts. The formation of rhinolites
usually lasts much longer, according to some authors even up to 15 years. The patients with rhinolites usually have not positive history on nasal foreign body. Burduk P.K. and assoc. stress that nasal foreign bodies are often asymptomatic and consequently may remain undetected for years, even imitating the intranasal lesion. Andrew Ban Guan Tay described a case of nasal foreign body in an adult man which was accidentally viewed by radiography in planning the operation of oral cavity. This patient had no symptoms in spite of that the encrusted plastic bead had been left in place for over 20 years. Considering that surgical intervention was planned under general anesthesia and with nasal intubation, hazardous pushing of foreign body down the lower airways was imminent.

After varying length of asymptomatic period, the most frequent symptoms of overlooked foreign body and rhinolite are unilateral nasal obstruction and mucopurulent secretion, which is often fetid and with traces of blood. The obstruction of osteo-meatal complex results in secondary sinusitis.

Hatakeyama Yoshio and assoc. described a case of 63-year old woman who had undergone operation of sinus empyema when she was 17, and who was subsequently treated for nasal secretion and bleeding for 8 years. The results of computerized tomography and fiberendoscopy failed to reveal the foreign body. Finally, during the endoscopic surgery of nasal polyps and granulation tissue, the foreign body was detected – it was partially calcified plastic rod.

Pellacchia V. and assoc. reported an unusual case of facial asymmetry in an adult patient as a result of long-term presence of foreign body in the nose, without distinct symptomatology and complications. It was detected accidentally on radiologic examination, and its extraction revealed that it was the question of a button.

Epiphora and perforation of septum are rarely seen in rhinolites.

Differential diagnosis of radiologically non-transparent lesions of the nose include different benign and malignant pathology, such as rhinolites, ossifying fibromas, calcifying polyps, odontogenous tumors, osteomas, osteosarcomas, etc.

Our patient had six-month anamnesis on repeated episodes of unilateral mucopurulent and ichorous secretion from nose. Conservative treatment provided by general practitioner produced no results, and computerized tomography showed calcified change in the lower nasal meatus. Rhinolite was suspected, but differential diagnosis could not definitely rule out other intranasal lesions. Foreign body was localized in deep lower meatus of the nose and inaccessible to inspection during the anterior rhinoscopy. Only upon the nasal endoscopy under general anesthesia and extraction of foreign body, the correct diagnosis could be made.

Our case is interesting, before all, because such case of exogenous rhinolite with so long asymptomatic period cannot be found in the available literature. In our patient, foreign body – plastic bead, had been left in place for 48 years, and the absence of symptomatology could be accounted for inertness of plastic material and no granuloma formation around the foreign body. Moreover, localization of foreign body in deep lower nasal meatus had not compromised the function of nasolacrimal duct and osteo-meatal complex. Development of unilateral mucopurulent and ichorous secretion from nose should always arouse the suspicion of foreign body as well as of other benign and malignant lesions of the nose and sinuses. No response to conservative treatment calls for otorhinolaryngological examination. In indefinite cases, algorithm should be added with computerized tomography and endoscopic examination of the nose, and suspected tissue or secret sent for pathohistological and microbiological examination.

CONCLUSION

Overlooked foreign bodies of the nose may be asymptomatic for several dozens of years. Negative medical history does not exclude the foreign body, and unilateral nasal obstruction and mucopurulent, sometimes ichorous secretion from nose are most common symptoms. Rhinolite should be suspected if radiologic diagnostics detected calcified mass in the nose in patient with unilateral nasal symptomatology. It often happens that only the endoscopic examination of the nose and extraction of rhinolite will lead to appropriate diagnosis which is usually not suspected in adults. Surgical removal of rhinolite results in complete resolution of symptoms.
postaju rinoliti sa latentnim periodom i po nekoliko desetina godina.

Ovaj rad prikazuje previdjeno strano telo nosa – enkrustiranu plastičnu perlu koja je nakon asimptomatskog perioda od 48 godina dovela do nastanka unilateralne mukopurulentne i sukrvičave sekrecije iz nosa. Na rinolit treba posumnjati ukoliko se radiološkom dijagnostikom otkrije kalcifikovana masa u nosu kod bolesnika sa unilateralnom nazalnom simptomatologijom. Hirurškim uklanjanjem rinolita dolazi do kompletne rezolucije simptoma.

Ovaj slučaj ukazuje na značaj anamnestičkih podataka i ispitivanja nosne šupljine kod svakog odraslog bolesnika sa unilateralnom nazalnom simptomatologijom koja je refraktna na konzervativni tretman. Kompjuterizovana tomografija paranazalnih sinusa je važno dopunsko dijagnostičko sredstvo u nejasnim slučajevima. I pored toga, često tek ekstrakcija rinolita ukazuje na dijagnozu na koju se kod odraslih obično ne misli.

Ključne reči: strano telo, nos

REFERENCES