



Case Report

Surgical Management of Nasopalatine Cyst: An Unusual Case Report

Munaza Shafi^{1*}, Reyaz Ahmad², Prabhati Gupta³, Nawal Khan⁴, Mirza Umair⁵

^{1,2,3}PG Student, Dept. of Periodontics, Govt. Dental College, Srinagar.

⁴Resident, Govt. Dental College, Srinagar.

⁵ Intern, Govt. Dental College, Srinagar.

*Correspondence Email: drmunaza.shafi@gmail.com

Received: 23/10/2013

Revised: 21/11/2013

Accepted: 06/12/2013

ABSTRACT

Cyst is a pathologic space in bone or soft tissue containing fluid or semifluid material and, in the oral regions, almost always lined by epithelium. Cyst over the hard palate is very infrequent. Cyst is commonly seen along nasopalatine duct or midline palatal cyst which are congenital. Only few cases of palatine cysts have been reported in literature. We present here the surgical management of cystic lesion over the hard palate in 21 years old male since 5 years.

Keywords: Nasopalatine Cyst, Median palatine cyst, Nasopalatine duct cyst.

INTRODUCTION

Cysts are not very uncommon pathologies found in the oral cavity. Being defined to have collection of fluid within a cavity lined by epithelium, a variety of cysts are described. Some are developmental and some are congenital in origin. Some varieties of cysts are known as their own entity because of their position. The Nasopalatine cyst was first described by Meyer in 1914.^[1,2] In the past, known as the fissured cyst, now according to the WHO classification is defined as a non-odontogenic, developmental, epithelial cyst of maxilla. Most of these cysts develop in the midline of anterior maxilla near the incisive foramen.^[3] The majority of cases occur between 4th and 6th decades of life. Slightly more common in males than

women, the ratio being 3:1^[3] Nasopalatine cysts are normally asymptomatic, constituting casual radiological findings, though sometimes (in 17% of cases) patients report pain due to the compression of structures adjacent to the cyst, particularly when the latter becomes overinfected, or in patients who wear dentures that compress the zone. The more caudal the location of the cyst, the sooner symptoms appears. These normally manifest as an inflammatory process (46% of cases) that rarely produces facial asymmetry, since growth or expansion is intraoral (palatine). The more advanced cases are able to cause pain.^[4]

Among all types of cysts diagnosed in dental surgery, a nasopalatine duct cyst is rare. Since 1960, the English-language literature has published only 468 case

reports.^[5] This paper reports the Management of a case of Nasopalatine Cyst in a 21 yr old male patient by palatal approach.

CASE REPORT

A 21 years old male presented with a swelling over the hard palate since 5 years and was associated with pain over the swelling. Clinical examination revealed a round swelling located on the nasopalatal region affecting the right and left central incisors, right lateral incisor and right canine which was almost 3-4 cm in diameter, and fluctuant on palpation. Careful history revealed extraction of upper right central

and lateral incisors 2-3 years back due to mobility of teeth.

Periapical radiograph of the area showed a round to oval radiolucency with a radiopaque margin located between the roots of 11,12,13 and 21 (Figure 1), A clinical diagnosis of a nasopalatine duct cyst was made. Therefore, surgical excision of the lesion was proposed to the patient. The surgical intervention was carried out under local anesthesia. Crevicular incision along with midcrestal incision was given (Figure 2) and the palatal flap elevated (Figure 3). The cystic lining and contents were removed and the lesion was completely enucleated.

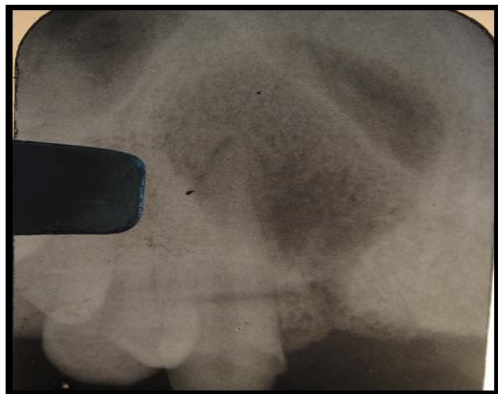


Figure 1(IOPAR showing radiolucency in the region 11, 12, 12, 21).

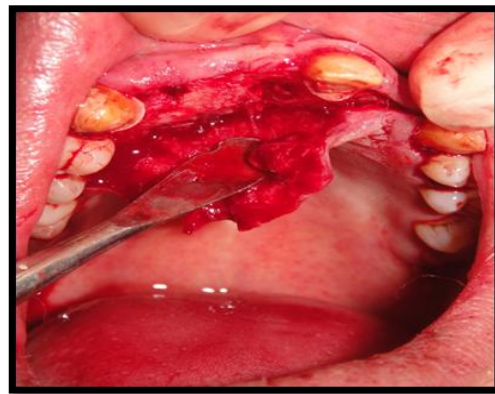


Figure 2 (midcrestal incision given and flap elevated).

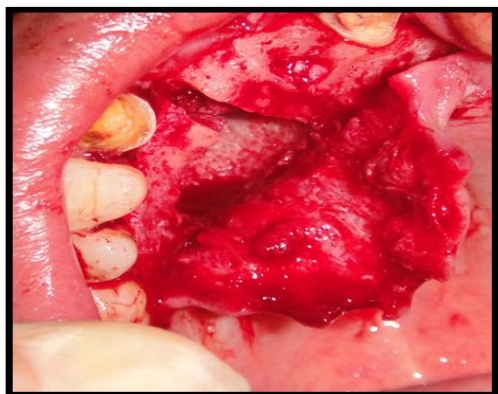


Figure 3 (cyst enucleated)

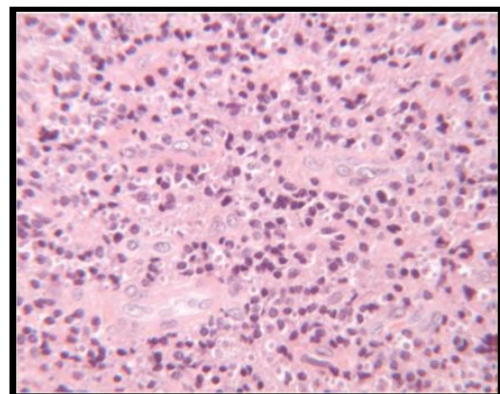


Figure 4 (Histopathological picture)

The histopathologic examination of the cystic lining revealed fibrous wall lined by thin stratified squamous epithelium and partly by pseudo stratified columnar

epithelium (Figure 4). A few nerve bundles and blood vessels were seen in cyst. These histological features, in conjunction with the site of lesion, suggested nasopalatine duct

cyst, which is regarded as a rare entity. [1, 2, 6] The postoperative course was uncomplicated and there was no lesion recurrence up to one year follow-up.

DISCUSSION

Cysts in the midline of the palate & nasoalveolar or na-sopalatine cysts are very uncommon. [6,7] The cysts in this region are usually an extension of cysts from adjacent regions, which involve or cross the midline. The cysts which arise from the midline and expand from there include median palatal cyst, nasopalatine or nasoalveolar cyst and nasopalatal duct cyst [8] Nasopalatine duct cysts (NPDCs) are almost three times more common in males than in females. [3] These lesions mainly manifest between the fourth and sixth decades of life [3] though there have been reports of NPDCs in pediatric patients up to 8 years of age. [2, 4] The etiology of these lesions is not clear; in addition to the hypothesis of spontaneous proliferation from embryonic tissue remains, other possible etiologies have been proposed – including prior trauma, poorly fitting dentures, the existence of local infection, or the influence of genetic and racial factors. [4] One feature common to this cyst is presence of vital teeth adjacent to the lesion and residual or periapical cyst. [9] However these can be confused with the primordial cyst arising from anterior supernumerary teeth i.e. Mesiodens. [10]

In this case the cyst presented like a residual cyst, as the history of the extraction of the teeth due to the mobility was present. However the patient had also lost other teeth due to same reason, it was ruled out.

The differential diagnosis may include an enlarged nasopalatine duct (less than 6 mm in diameter), central giant cell granuloma, a radicular cyst associated to the upper central incisors, follicular cyst associated with mesiodens, primordial cyst, nasoalveolar cyst, osteitis with palatal

fistulization, and bucconasal and/or buccosinus communication. The treatment of choice is surgical excision of the cyst, although some authors propose marsupialization of large NPDCs. [8] The nasopalatine neurovascular bundle is a delicate and highly vascularized structure giving rise to profuse bleeding if inadvertently sectioned during surgery. Electrocoagulation is required in such cases. Paresthesia of the anterior palatal zone is a rare complication found in 10% of the cases on removing nerve endings of the nasopalatine nerve along with the membrane of the cyst [8] The histological study of NPDCs normally only reveals squamous cell epithelium (in 40% of cases), though in some cases the latter is combined with other types of epithelium such as ciliary cylindrical cells. [11] The cyst lumen usually contains an abundant inflammatory infiltrate with a great variety of polymorphonuclear leukocytes, secondary to chronic inflammation. [11]

CONCLUSION

The present case is of particular clinical interest as Palatine cysts are rare and it is important that clinician should be aware of the features of this cyst as nearly 40% of the cases are totally asymptomatic and found only during routine clinical examination. Due to extent of the lesion, surgical enucleation was the choice of treatment. Our case demonstrated typical clinical, radiographical and histopathological features of palatine cyst.

REFERENCES

1. Meyer A. A unique supernumerary paranasal sinus directly above the superior incisors. *J Anato My*1914;48:118-29.
2. Ely N, Sheehy EC, McDonald F. Nasopalatine duct cyst: a case report.

- Int J Paediatr Dent 2001 Mar;11(2):135-7.
3. Sapp J, Eversole L, Wysocki G, editors. Contemporary oral and maxillofacial pathology. 2nd ed. St. Louis: Mosby; 2004.
 4. Velasquez-Smith MT, Mason C, Coonar H, Bennett J. A nasopalatine cyst in an 8-year-old child. Int J Paediatr Dent. 1999;9(2):123-7.
 5. Torres L.M., Benito J.I., Morais D, Fernandez A.: Nasopalatine duct cyst: case report. Acta Otorrinolaringol. Esp. 2008, 59, 250–251.
 6. Sazgar A, Sadeghi M, Yazdi A, Ojani L. Transnasal endoscopic marsupialization of bilateral nasoalveolar cysts. International journal of oral and maxillofacial surgery 2009.
 7. A Erkan, C. Ylmazer, I. Ylmaz and F. Bolat, “Nasoal-veolar Cysts: Review of 3 Cases,” *ORL: Journal for Oto- Rhino-Laryngology*, Vol. 67, No. 4, 2005, p. 196.
 8. R. Vasconcelos, M. Aguiar, W. Castro, V. Araújo and R. Mesquita, “Retrospective Analysis of 31 Cases of Naso- palatine Duct Cyst,” *Oral Diseases*, Vol. 5, No. 4, 2008, pp. 325-328.
 9. Kato H, Kanematsu M, Kusunoki Y, Shibata T, Murakami H, Mizuta K, Ito Y, Hirose Y. Nasoalveolar cyst: imaging findings in three cases. *Clinical imaging* 2007;31(3):206-9.
 10. Manzon S, Graffeo M, Philbert R. Median Palatal Cyst: Case Report and Review of Literature. *Journal of Oral and Maxillofacial Surgery* 2009;67(4):926-30.
 11. Elliott KA, Franzese CB, Pitman KT. Diagnosis and surgical management of nasopalatine duct cysts. *Laryngoscope*. 2004;114(8):1336-40.

How to cite this article: Shafi M, Ahmad R, Gupta P et. al. Surgical management of nasopalatine cyst: an unusual case report. *Int J Health Sci Res*. 2013;3(12):189-192.

International Journal of Health Sciences & Research (IJHSR)

Publish your work in this journal

The International Journal of Health Sciences & Research is a multidisciplinary indexed open access double-blind peer-reviewed international journal that publishes original research articles from all areas of health sciences and allied branches. This monthly journal is characterised by rapid publication of reviews, original research and case reports across all the fields of health sciences. The details of journal are available on its official website (www.ijhsr.org).

Submit your manuscript by email: editor.ijhsr@gmail.com OR editor.ijhsr@yahoo.com