Otolaryngology International

Corresponding address
Red Flower Publication Pvt. Ltd.
48/41-42 DSIDC, Pocket-II,
Mayur Vihar Phase-I
Delhi - 110 091(India)
Phone: 91-11-22754205/45796900,
Fax: 91-11-22754205
E-mail: info@rfppl.co.in
Web:www.rfppl.co.in

Otolaryngology International (**ISSN: 2456-5024)** is a peer-reviewed, journal that publishes original research articles, review articles, and clinical studies in all areas of otolaryngology. The journal also includes developments in otology, neurotology, audiology, rhinology, allergy, laryngology, speech science, bronchoesophagology, facial plastic surgery, and head and neck surgery.

Subscription Information

India
Institutional (1 year) (Print+Online): INR5500

Rest of the World
Insitutional (1 year) (Print+Online): $430

Payment instructions
Online payment link:
http://rfppl.co.in/payment.php?mid=15

Cheque/DD:
Please send the US dollar check from outside India and INR check from India made. Payable to 'Red Flower Publication Private Limited'. Drawn on Delhi branch

Wire transfer/NEFT/RTGS:
Complete Bank Account No. 604320110000467
Beneficiary Name: Red Flower Publication Pvt. Ltd.
Bank & Branch Name: Bank of India; Mayur Vihar
MICR Code: 110013045
Branch Code: 6043
IFSC Code: BKID0006043 (used for RTGS and NEFT transactions)
Swift Code: BKIDINBBDOS

Send all Orders to: Subscription and Marketing Manager, Red Flower Publication Pvt. Ltd., 48/41-42, DSIDC, Pocket-II, Mayur Vihar Phase-I, Delhi - 110 091(India), Phone: 91-11-45796900, 22754205, 22756995, E-mail: sales@rfppl.co.in, Website: www.rfppl.co.in

Otolaryngology International

January - June 2018
Volume 3, Number 1

Contents

Original Article

Study on Dimensions of Nasal Columella to Aid Aesthetic Rhinoplasty **5**
Siddapur G.K., Siddapur K.R.

Case Reports

A Rare Case of Co-Existence of Second Branchial Fistula and Thyroglossal Cyst **9**
Angshuman Dutta, Santosh Kumar

Abnormal Location of Natural Maxillary sinus Ostium **13**
Praneeth Potluri, Saurabh Varshney, Manu Malhotra

Interesting Case of an Atypical Aural Polyp **17**
Nitin Ravindra Ankale, P.R. Malur, Utkarsh Anand,
Rajesh R. Havaldar, Ashutosh Prasad

Guidelines for Authors **21**

Otolaryngology International

Library Recommendation Form

If you would like to recommend this journal to your library, simply complete the form below and return it to us. Please type or print the information clearly. We will forward a sample copy to your library, along with this recommendation card.

Please send a sample copy to:

Name of Librarian

Name of Library

Address of Library

Recommended by:

Your Name/ Title

Department

Address

Dear Librarian,

I would like to recommend that your library subscribe to the **Otolaryngology International**. I believe the major future uses of the journal for your library would provide:

1. useful information for members of my specialty.
2. an excellent research aid.
3. an invaluable student resource.

I have a personal subscription and understand and appreciate the value an institutional subscription would mean to our staff.

Should the journal you're reading right now be a part of your University or institution's library? To have a free sample sent to your librarian, simply fill out and mail this today!

Stock Manager

Red Flower Publication Pvt. Ltd.

48/41-42, DSIDC, Pocket-II

Mayur Vihar Phase-I

Delhi - 110 091(India)

Phone: Phone: 91-11-45796900, 22754205, 22756995, Fax: 91-11-22754205

E-mail: sales@rfppl.co.in

Original Article

Otolaryngology International
Volume 3 Number 1, January - June 2018

Study on Dimensions of Nasal Columella to Aid Aesthetic Rhinoplasty

Siddapur G.K.*, Siddapur K.R.**

Author Affiliation: *Associate Professor, Dept. of Otorhinolaryngology **Professor, Dept. of Forensic Medicine, Velammal Medical College Hospital and Research Institute, Tamil Nadu Dr. MGR Medical University, Madurai, Tamil Nadu 625009, India.

Corresponding Author: Geetha K. Siddapur, Associate Professor, Dept. of Otorhinolaryngology, Velammal Medical College Hospital and Research Institute, Madurai, Tamil Nadu 625009, India.
E-mail: drgeetabm@gmail.com

Received on: 04.05.2018, **Accepted on:** 22.05.2018

Abstract

Aims: Thorough knowledge of an Indian nose is vital for performing aesthetic Rhinoplasty. Hence the present study was taken up with the aim to determine dimensions of nasal columella and columellar index of Tamil ethnic group; and also to statistically analyse gender wise difference in findings

Settings and Design: The present cross-sectional study, approved by the Institutional Ethics Committee, was done on Tamil speaking medical students of Velammal Medical College, Madurai, Tamil Nadu.

Methods & Material: Of total 142 medical student population, 106 Tamil speaking medical students participated. Consenting Tamil speaking students were included. Individuals with noticeable facial disfigurement and with history of previous facial surgery were excluded.

Statistical Analysis used: Unpaired t test

Results: The present study reports mean values for nasal columella width, length and index as 6.63mm, 13.8mm, and 48.6 for males; 5.61mm, 13.53mm and 41.9 for females; and 6.84mm, 13.65mm and 45 for the whole group.

Conclusion: The present study infers that nasal columella width greater than 5.9 mm belongs to male, and lesser than 5.9 mm belongs to a female; and nasal columella index is greater than 48 in males, and lesser than 45 in females. Nasal columella length findings were inconclusive.

Keywords: Otolaryngology; Columellar Length; Columellar Width; Columellar Index; Aesthetic Rhinoplasty.

Introduction

For aesthetic rhinoplasty, nasal columella is a major component. The columella has anterior lobular portion, the intermediate (or narrower) portion, and the basal (or wider) portion. The columella, ala, and lobule have now been included as an aesthetic complex for evaluation; and their interrelation may affect any nasal tip surgery, a fact that should be considered while planning surgery in that region. Thorough knowledge of an Indian nose is vital for performing aesthetic Rhinoplasty. Hence the present study was taken up with the aim to determine dimensions of nasal columella and columellar index of Tamil ethnic group; and also to statistically analyse gender wise difference in findings.

Columella is oriented vertically and is primarily responsible for nostril length and nasal tip projection and determines nasal tip size, shape, and nostril configuration. Hence, it is important to understand that individual, racial and ethnic variations within the structural compo-nents of the nasal tip are bound to exist. In general, the nose can be described as being platyrrhine (African), mesorrhine (Asian), or leptorrhine (Caucasian). The African and Asian noses do share many common features and can be described as less projected with a shorter colu-mella. A common finding with bilat-eral cleft lip nose is underprojection and a short columella, wherein,

V-Y advancement technique incision allows the surgeon to ex-pose and augment the nasal tip structures by lengthening the columella [1,2].

Material & Method

The present cross-sectional study was conducted during the months of January to April 2017. The study was approved by Institutional Ethics Committee and was ethically conducted in accordance with Declaration of Helsinki. Written informed consent was taken from the participants before data collection. 106 (49 males and 57 females) Tamil speaking medical students, 19-21years of age, participated in the study. Consenting Tamil speaking students were included. Individuals with noticeable facial disfigurement and with history of previous facial surgery were excluded. Sample size was calculated using Sample Size Calculator presented as a public service of Creative Research Systems: Survey software, 'The Survey System'. Sample size was 106 (Confidence Level at 95%, and Confidence Interval of 5) of total 142 students (population).

Participants were positioned as described by Farkas *et al. [3]*. Columellar measurements were taken manually using *Sliding Vernier calliper*. The Parameters assessed were, Columellar width (CW), Columellar length (CL), and Columellar index (CI). Columella Width was measured at the narrowest point at subnasale and Columellar Length was measured from sub nasale to nasal tip [4]. Columellar index (CI) was calculated using formula CI= CW / CL x 100. Statistical evaluation was done using *unpaired t test*. Statistical significance was determined at $p<0.05$.

Results

Columellar findings were tabulated in a Master-Chart. Statistical values namely, Mean, Standard Deviation (SD), Standard Error of Mean (SEM), and 95% Confidence interval ($CI._{95}$) of the difference in mean of male (m) and female (f) participants were estimated using unpaired t test. Intermediate values in calculation were t value, degrees of freedom (df), and standard error of difference (SED). Gender wise differences were significant at $p<0.05$ (*with unpaired t test*) in all measured parameters. Table1 indicates Statistical findings for columellar measurements in males, females and total participants and Table 2 indicates Statistical findings (*with unpaired t test*) on gender wise differences in analysed parameters.

Table 1: Statistical findings for columellar measurements

N=106		CW	CL	CI
Male Participants (n = 49)	Mean	6.63 mm	13.8 mm	48.6
	SD	0.73	1.79	6.23
	SEM	0.1	0.26	0.89
Female Participants (n = 57)	Mean	5.61 mm	13.53 mm	41.9
	SD	1.45	3.12	8.18
	SEM	0.19	0.41	1.08
All Participants (n = 106)	Mean	6.84 mm	13.65 mm	45
	SD	1.27	2.59	8.04
	SEM	0.12	0.25	0.78

CW-Columellar width, CL- Columellar length, CI- Columellar index, SD-Standard Deviation, SEM-Standard Error of Mean

Table 2: Statistical findings on gender wise differences in analysed parameters

	$CI._{95}$	t value	DF	SED	p value	Statistical Inference
CW	0.57 to 1.47	4.4607	104	0.228	Less than 0.0001	extremely significant
CL	0.73 to 1.27	0.5334	104	0.505	0.5949	Not Significant
CI	3.8 to 9.5	4.6729	104	1.431	Less than 0.0001	extremely significant

CW-Columellar width, CL- Columellar length, CI- Columellar index, M – Mean, SD - Standard Deviation, SEM - Standard Error of Mean, $CI._{95}$- 95% Confidence interval of the difference in mean of male (m) and female (f) participants, SED - Standard Error of Difference

Discussion

There haven't been studies of similar kind previously. Cho *et al.* reported columellar findings in infants which cannot be compared with the present study [5]. Farkas *et al.* and HeZ *et al.* reported smaller columella in Asians to that off Caucasians [6,7]. Poor development of medial and lateral crura could be the reason for short and narrow columella in Asian populations. Columella strut being one of the commonly performed procedures in Asian rhinoplasty justifies the aforementioned hypothesis [4].

Columellar morphology and orientation must be considered when deciding appropriate surgical pro-cedure for tip refinement and nostril shape augmentation. In rhino-plasty operation, aesthetics and function are objectives; and anatomy determines the op-erative technique. Changes in col-umella are performed to increase or decrease nasal tip projection. Col-umella can be viewed as the center pole of a tent, wherein, height alterations of the center pole results in an increase or decrease in nasal tip projection. Changes in projection, in turn affects nostril shape and ori-entation [8,9]. Nasal tip and the nostril shape are complex anatomical structures consisting of cartilaginous framework, skin and soft tissue. When preparing for rhinoplasty operations, it is important to con-sider ethnic and individual variations in the nasal tip, nostril shape, and internal structure. By categorizing nasal tip into its respec-tive subunits, the rhinoplasty surgeon can then formulate a systematic and pragmatic ap-proach to the nasal base, lateral wall, and colu-mella. Altering or augmenting one or all of these is bound to affect nasal tip, shape and orientation of the nostril [1,2].

In Rhinoplasty, post-operative complications result from nasal healing that causes changes in nasal morphology and function [9,10]. The surgeon should anticipate these healing forces and take into account support mechanisms of the nasal tip when planning an optimal approach for the surgery [11].

Conclusion

The present study infers that nasal columella width greater than 5.9 mm belongs to male, and lesser than 5.9 mm belongs to a female; and nasal columella index is greater than 48 in males, and lesser than 45 in females. Nasal columella length findings were inconclusive. The present study results will help surgeons avoid complications by anticipating healing forces and take into account support mechanisms of the nasal tip when planning an optimal approach for aesthetic nasal surgeries. The authors of the present study believe that knowledge of columellar morphology of a particular gender, geographical area and ethnic group is important for the surgeon to plan an approach for aesthetic nasal surgeries.

Key message

Knowledge of Nasal Columellar morphology of a particular gender, geographical area and ethnic group is important for the surgeon to plan an approach for aesthetic nasal surgeries.

References

1. Changing the Nostril Shape. David Sherris, M.D. https://www.drsherris.com/articles-and-research/changing-the-nostril-shape.
2. Shield Graft. Changing the Nostril Shape. http://shieldgraft.blogspot.in/2012/03/changing-nostril-shape.html.
3. Farkas LG, Katic MJ, Forrest et al. International anthropometric study of facial morphology in various ethnic groups/races. J Craniofac Surg 2005;126:615-46.
4. Suhk J, Park J, Nguyen AH. Nasal Analysis and Anatomy: Anthropometric Proportional Assessment in Asians—Aesthetic Balance from Forehead to Chin, Part I. Seminars in Plastic Surgery. 2015;29(4): 219-25. doi:10.1055/s-0035-1564817.
5. Cho BC, Kim JY, Yang JD, Chung HY, Park JW, Hwang JH. The journal of craniofacial surgery. 2006;17(1):57-61.
6. Farkas L G, Hreczko T A, Deutsch C K. Objective assessment of standard nostril types—a morphometric study. Ann Plast Surg. 1983;11(5): 381–89.
7. He Z J, Jian X C, Wu X S, Gao X, Zhou S H, Zhong X H. Anthropometric measurement and analysis of the external nasal soft tissue in 119 young Han Chinese adults. J Craniofac Surg. 2009;20(5): 1347–51.
8. Chung C, Lee Y, Park KH, Park SH, Park YC, Kim KH. Nasal changes after surgical correction of skeletal Class III malocclusion in Koreans. The Angle orthodontist. https://www.ncbi.nlm.nih.gov/pubmed/18416623. Published May 2008.
9. Khamashta-Ledezma L, Naini FB, Manisali M. Review of nasal changes with maxillary orthognathic surgery. Journal of Istanbul University Faculty of Dentistry. 2017;51(3 Suppl 1):S52-S61. doi:10.17096/jiufd.09789.

10. Toriumi DM. Structure approach in rhinoplasty. Facial Plast Surg Clin North Am 2002;10(1):1-22.
11. Dobratz EJ, Tran V, Hilger PA. Comparison of techniques used tosupport the nasal tip and their long-term effects on tip position. Arch Facial Plast Surg 2010;12:172-9.

Case Report

Otolaryngology International
Volume 3 Number 1, January - June 2018

A Rare Case of Co-Existence of Second Branchial Fistula and Thyroglossal Cyst

Angshuman Dutta*, Santosh Kumar**

Author Affiliation: *Professor and Head **Senior Resident, Command Hospital Air Force, Post Agram, Bangalore, Karnataka 560007, India.

Corresponding Author: Angshuman Dutta, Professor and Head, Command Hospital Air Force, Post Agram, Bangalore, Karnataka 560007, India.
E-mail: duttaangshuman@rediffmail.com

Received on: 23.04.2018, **Accepted on:** 25.05.2018

Abstract

Thyroglossal duct are the most common congenital neck masses followed by branchial cleft anomalies. Thyroglossal duct cysts are 3 times more common than branchial cleft anomalies.It is extremely rare to find the coexistence on the above two anomalies in the same individual which is presented in the case report.

The purpose of this article is to report the simultaneous rare coexistence of 2 congenital cervical anomalies and describe its clinical features and management of such anomalies.

Keywords: Simultaneous Branchial Fistula; Thyroglossal Cyst.

Introduction

Congenital masses of head and neck are one of the commonest swellings in the neck in children Thyroglossal duct cysts and then branchial cleft anomalies are the most common neck masses. A concurrent presentation of these 2 anomalies has been described in only 2 cases and is described in this case report.

Case Details

A 5 year old male child was brought to ENT OPD by his parents with chief complaints of discharging sinus in the lower part of the neck since past 2 months. Apparently 2 months ago his parents noticed whitish glue like secretions of scanty quantity spontaneously coming from a small punctum in the neck. There was no history of any pain or swelling in the neck. No history of any fever. No history of difficulty in breathing/ swallowing. No history of any painful neck movements. No history any congenital abnormalities. No significant antenatal or postnatal history.

On examination a pinhole sized opening (Figure 1) was seen on the right side of the neck and was located about 1cm away from the midline and was about 1cm above the medial end right clavicle ant aspect of Rt sternocleidomastoid. Skin around the opening appeared normal with no swelling or redness around it. No discharge was expressed on applying pressure over the tract. Another small.5cm by 1cm suprahyoid cystic swelling was also seen. There was no cervical lymphadenopathy. Examination of Ear, nose and throat was normal.

USG neck – showed a well defined cystic lesion of (6.4 x 6.3 x 4.9mm) seen in suprahyoid region in the midline which moved with deglutition and protrusion of tongue suggestive of infected thyroglossal cyst. MRI neck (Figure 2)T2 Hyperintense cystic lesion noted at the level of foramen ceacum. In posterior third of tongue measuring 7.2 x 4.mm in size. T1, T2 images showed hypointense tract with external opening just above sternal end of the right clavicle and internally reaching upto the floor of mouth with indistinct

extent which was suggestive of thyroglossal cyst and branchial fistula right side of neck. The final diagnosis was thyroglossal cyst coexisting with branchial fistula on right side of the neck. Patient was taken for Sistrunk's operation with Branchial fistula excision (Figure 3) under GA. Sistrunk's operation was performed during which cystic swelling identified in suprahyoid region along with the tract. Cyst along with the tract dissected upto tongue base and removed .

For branchial fistula, the mouth of the sinus encompassed in the incision with a transverse elliptical incision. Methylene blue dye injected into the fistula tract and it was seen to be extending medially and superiorly. A second incision like a stepladder incision was given 2cm below angle of mandible, rail roading of the tract done. The tract was seen going lateral to the posterior belly of digastric into the tonsillar fossa where it was dissected and ligated.

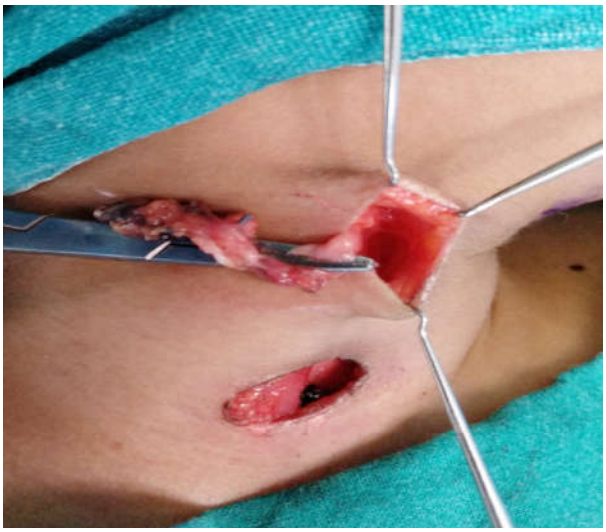

Fig. 1: Dissection of branchial fistula

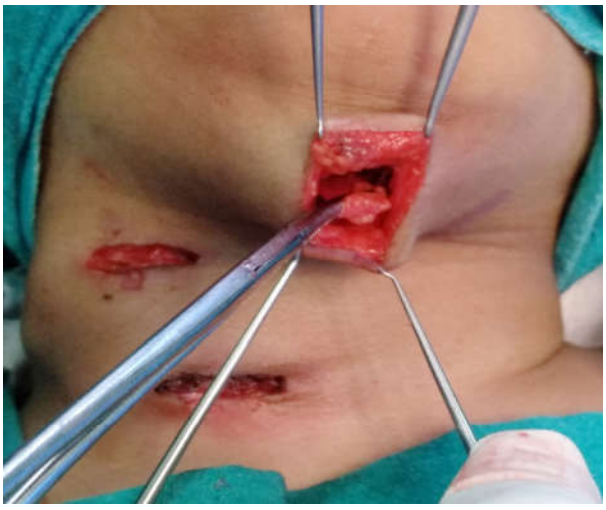

Fig. 2: Dissection of thyroglossal cyst

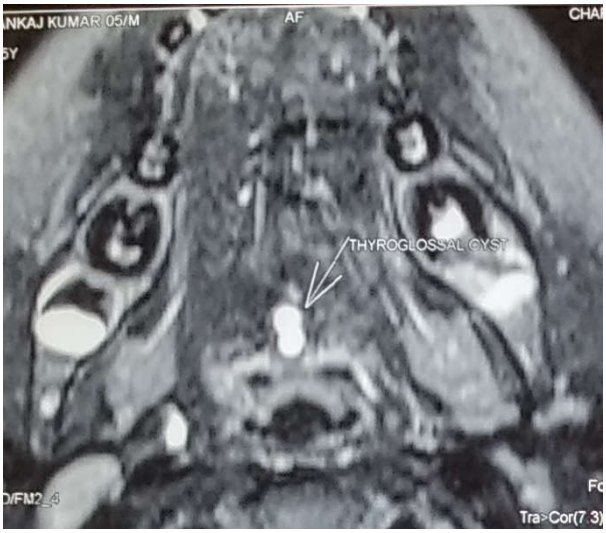

Fig. 3: MRI axial image showing the thyroglossal cyst

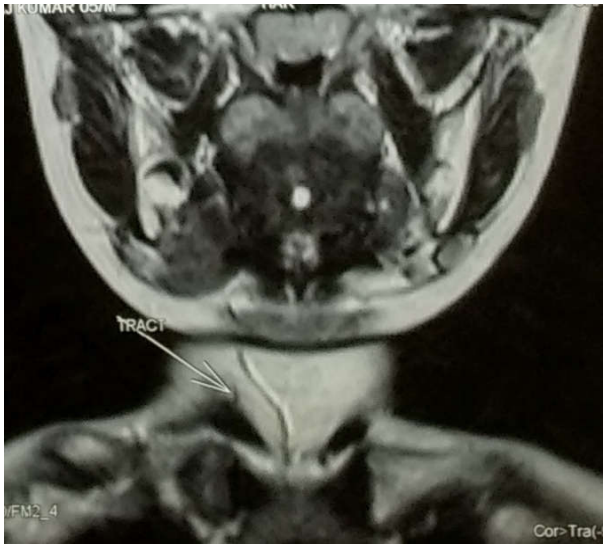

Fig. 4: MRI image showing the tract of branchial fistula

Discussion

Ninety percent of neck masses in children are benign of which 55 percent were congenital. Benign neck swellings may be nodal or cystic, lateral or central, inflammatory or congenital. The most common cystic structures are branchial cysts and thyroglossal cysts. These may present as infections or become infected .

During the migration of thyroid primordium to lie anterior to trachea, there is a connection between foramen cecum and thyroid gland which forms the thyroglossal duct. Occasionally, a portion of the thyroglossal duct may remain that forms an enclosed thyroglossal duct cyst or a thyroglossal fistula which has a communication with the surface of the neck.

Branchial abnormalities occur when there is disturbance in the maturation of the branchial apparatus during fetal development. Branchial anomalies account for 20% of all congenital masses in children [1]. During the 5th week of intrauterine life second branchial arch grows over the third and fourth branchial clefts which form a cervical sinus. Failure of the cervical sinus to close may therefore potentially communicate with the second branchialpouch (and therefore the tonsil fossa) Branchial fistulae usually present in childhood as a weeping defect along the anterior border of sternocleidomastoid, or occasionally as an acute infection.

About 75% of patients with thyroglossal duct anomalies are diagnosed before 30 years of age, and more than half of these are identified before age 10years [2]. Patients present commonly with an asymptomatic, cystic neck mass in the midline near the hyoid bone. 66% of the location for the cystic mass is adjacent to the hyoid bone [3,4]. Although both these congenital anomalies occur individually, they are rarely seen coexisting in the same patient [4]. In our case both the anomalies were seen coexisting in the child.

Rarely a low-lying thyroglossal cyst may present as lateral cervical discharge without a palpable mass mimicking a second branchial cleft fistula which can be made out on imaging [5].

Ultrasound scanning is accurate, quick, non – invasive and cost-effective so it is theinvestigation of choice for diagnosing these above congenital anomalies. Further investigations like CT, MRI and radionuclide scanning should be undertaken to ensure that a normal thyroid gland is present and to know the extent of the cyst and fistula. Fistulae may be investigated with a sinogram.

Pharyngoscopy:

If needed can be done with careful examination of the tonsil fossa and piriform fossa should be undertaken prior to excision. In our case MRI was useful in confirming the diagnosis of both pathologies.

Surgical excision of the cysts and fistulas are the treatment of choice. Recurrence rates are significantly less after Sistrunk's operation than after simple cyst excision. Surgery should include excision of the hyoid and a cuff of tongue base muscle to prevent recurrence .

A second branchial fistula might require one or more further skin incisions to allow safe dissection to the carotid and extension and dissection upto the tonsil fossa opening.

Conclusion

Two congenital anomalies thyroglossal duct cyst and branchial cleft fistulae may coexist in a single patient. This case enlightens us that more than one anomaly can be seen in same patient simultaneously. This can be diagnosed by proper investigations and recurrence prevented by doing a proper planned surgery.

References

1. Roback SA, Telander RL. Thyroglossal duct cysts and branchial cleft anomalies. Semin Pediatric Surg 1994;3:142-6.
2. Enepekides DJ. Management of congenital anomalies of the neck. Facial Plast Surg Clin North Am 2001;9(1):131-45.
3. Foley DS, Fallat ME. Thyroglossal duct and other congenital midline cervical anomalies. Semin Pediatr Surg 2006;15(2):70-5.
4. Mahdhuofi R, Barhmi I, Tazi N et al. A rare case report of a child coexistence thyroglossal cyst and second branchial cleft fistulae Indian J Otolaryngol head neck surgery. 2017;69:263-65.
5. Hong SM, Moon. Journal of Pediatric Surgery. Low lying thyroglossal duct cyst with lateral cervical discharge masquerading as a second branchial cleft fistula: a case report. 2013;48(2):429-43.

Revised Rates for 2018 (Institutional)

Title	Frequency	Rate (Rs): India		Rate ($):ROW	
Community and Public Health Nursing	Triannual	5500	5000	430	391
Dermatology International	Semiannual	5500	5000	430	391
Gastroenterology International	Semiannual	6000	5500	469	430
Indian Journal of Agriculture Business	Semiannual	5500	5000	413	375
Indian Journal of Anatomy	Bi-monthly	8500	8000	664	625
Indian Journal of Ancient Medicine and Yoga	Quarterly	8000	7500	625	586
Indian Journal of Anesthesia and Analgesia	Monthly	7500	7000	586	547
Indian Journal of Biology	Semiannual	5500	5000	430	391
Indian Journal of Cancer Education and Research	Semiannual	9000	8500	703	664
Indian Journal of Communicable Diseases	Semiannual	8500	8000	664	625
Indian Journal of Dental Education	Quarterly	5500	5000	430	391
Indian Journal of Emergency Medicine	Quarterly	12500	12000	977	938
Indian Journal of Forensic Medicine and Pathology	Quarterly	16000	15500	1250	1211
Indian Journal of Forensic Odontology	Semiannual	5500	5000	430	391
Indian Journal of Genetics and Molecular Research	Semiannual	7000	6500	547	508
Indian Journal of Hospital Administration	Semiannual	7000	6500	547	508
Indian Journal of Hospital Infection	Semiannual	12500	12000	938	901
Indian Journal of Law and Human Behavior	Semiannual	6000	5500	469	430
Indian Journal of Legal Medicine	Semiannual				
Indian Journal of Library and Information Science	Triannual	9500	9000	742	703
Indian Journal of Maternal-Fetal & Neonatal Medicine	Semiannual	9500	9000	742	703
Indian Journal of Medical & Health Sciences	Semiannual	7000	6500	547	508
Indian Journal of Obstetrics and Gynecology	Bi-monthly	9500	9000	742	703
Indian Journal of Pathology: Research and Practice	Monthly	12000	11500	938	898
Indian Journal of Plant and Soil	Semiannual	65500	65000	5117	5078
Indian Journal of Preventive Medicine	Semiannual	7000	6500	547	508
Indian Journal of Research in Anthropology	Semiannual	12500	12000	977	938
Indian Journal of Surgical Nursing	Triannual	5500	5000	430	391
Indian Journal of Trauma & Emergency Pediatrics	Quarterly	9500	9000	742	703
Indian Journal of Waste Management	Semiannual	9500	8500	742	664
International Journal of Food, Nutrition & Dietetics	Triannual	5500	5000	430	391
International Journal of Neurology and Neurosurgery	Quarterly	10500	10000	820	781
International Journal of Pediatric Nursing	Triannual	5500	5000	430	391
International Journal of Political Science	Semiannual	6000	5500	450	413
International Journal of Practical Nursing	Triannual	5500	5000	430	391
International Physiology	Triannual	7500	7000	586	547
Journal of Animal Feed Science and Technology	Semiannual	78500	78000	6133	6094
Journal of Cardiovascular Medicine and Surgery	Quarterly	10000	9500	781	742
Journal of Forensic Chemistry and Toxicology	Semiannual	9500	9000	742	703
Journal of Geriatric Nursing	Semiannual	5500	5000	430	391
Journal of Global Public Health	Semiannual				
Journal of Microbiology and Related Research	Semiannual	8500	8000	664	625
Journal of Nurse Midwifery and Maternal Health	Triannual	5500	5000	430	391
Journal of Organ Transplantation	Semiannual	26400	25900	2063	2023
Journal of Orthopaedic Education	Triannual	5500	5000	430	391
Journal of Pharmaceutical and Medicinal Chemistry	Semiannual	16500	16000	1289	1250
Journal of Practical Biochemistry and Biophysics	Semiannual	7000	6500	547	508
Journal of Psychiatric Nursing	Triannual	5500	5000	430	391
Journal of Social Welfare and Management	Triannual	7500	7000	586	547
New Indian Journal of Surgery	Bi-monthly	8000	7500	625	586
Ophthalmology and Allied Sciences	Triannual	6000	5500	469	430
Otolaryngology International	Semiannual	5500	5000	430	391
Pediatric Education and Research	Triannual	7500	7000	586	547
Physiotherapy and Occupational Therapy Journal	Quarterly	9000	8500	703	664
RFP Indian Journal of Medical Psychiatry	Semiannual	8000	7500	625	586
Urology, Nephrology and Andrology International	Semiannual	7500	7000	586	547

Terms of Supply:

1. Agency discount 10%. Issues will be sent directly to the end user, otherwise foreign rates will be charged.
2. All back volumes of all journals are available at current rates.
3. All Journals are available free online with print order within the subscription period.
4. All legal disputes subject to Delhi jurisdiction.
5. Cancellations are not accepted orders once processed.
6. Demand draft / cheque should be issued in favour of "Red Flower Publication Pvt. Ltd." payable at Delhi
7. Full pre-payment is required. It can be done through online (http://rfppl.co.in/subscribe.php?mid=7).
8. No claims will be entertained if not reported within 6 months of the publishing date.
9. Orders and payments are to be sent to our office address as given above.
10. Postage & Handling is included in the subscription rates.
11. Subscription period is accepted on calendar year basis (i.e. Jan to Dec). However orders may be placed any time throughout the year.

Order from
Red Flower Publication Pvt. Ltd., 48/41-42, DSIDC, Pocket-II, Mayur Vihar Phase-I, Delhi - 110 091 (India), Tel: 91-11-22754205, 45796900, Fax: 91-11-22754205. E-mail: sales@rfppl.co.in, Website: www.rfppl.co.in

Case Report

Otolaryngology International
Volume 3 Number 1, January - June 2018

Abnormal Location of Natural Maxillary Sinus Ostium

Praneeth Potluri*, Saurabh Varshney, Manu Malhotra*****

Author Affiliation: *Junior Resident **Professor & Head ***Additional Professor, Department of Otorhinolaryngology & Head Neck Surgery, All India Institute of Medical Sciences, Rishikesh, Uttarakhand 249203, India.

Corresponding Author: Saurabh Varshney, Professor & Head, Department of E.N.T., All India Institute of Medical Sciences, Rishikesh, Uttarakhand 249203, India.
E-mail: drsaurabh68@gmail.com

Received on: 28.12.2017, **Accepted on:** 24.01.2018

Abstract

The anatomy of maxillary ostium is highly variable in size, shape and position. The endoscopic sinus surgeons should have detailed knowledge about variations of maxillary sinus opening in any endoscopic sinus surgeries as it is closely related to the orbital floor above, sphenopalatine artery posteriorly and nasolacrimal duct anteriorly.

We report a case of abnormal location of natural maxillary sinus ostium at extreme posterior tip of infundibulum, which was identified during functional endoscopic sinus surgery and managed successfully.

Keywords: Maxillary sinus Ostium; sphenopalatine artery.

Introduction

Middle meatal antrostomy (MMA) is one of the important steps during functional endoscopic sinus surgery (FESS). The final outcome of surgery is directly related to patency of the maxillary sinus ostia especially in cases of nasal polyp. Identification of maxillary ostium is necessary for performing MMA. Normally, natural ostium of the maxillary sinus drains into the inferior aspect of the infundibulum at a 45-degree angle, and it is found just below the orbital floor in the medial wall of the sinus. It usually lies halfway between the anterior and posterior walls of the sinus 4cms higher from hard palate [1]. Wigand (1994) stated it to be just superior to the midportion of insertion of inferior turbinate (supraturbinal). Kennedy *et al.* found it at the junction of anterior one third and posterior two third of middle turbinate[2]

Here we report a rare case of bilateral nasal pan polyposis with abnormal opening of principle maxillary sinus ostium in extreme posterior tip of ethmoidal infundibulum in leftostio-meatal complex. The principal maxillary sinus ostium in rightostio-meatal complex was in thenormal anatomical position.

Case Report

A 18yrs old boy presented in outpatient department with the chief complaints of bilateral nasal obstruction (left > right) since 6 months, bilateral mucoid nasal discharge, scanty, non-foul smelling and intermittent dull aching pain in the left side of nose. There was no history of epistaxis, itching in nose, excessive sneezing, disturbances of smell, headache.

On anterior rhinoscopy, there was mild deviation of nasal septum to right, and pale polypoidal tissue seen in right middle meatus, arising from right ostiomeatal complex, and on left side, pale polypoidal tissue seen filling the entire nasal cavity, soft in consistency, not bleeding on touch. Nasal patency was decreased on both sides. There was no paranasal sinus tenderness. On posterior rhinoscopy, polypoidal tissue was seen in bilateral posterior

choanae. Anterior rhinoscopy and posterior rhinoscopy findings were confirmed by diagnostic nasal endoscopy (Figure 1 & 2)

Patient had no relief of symptoms with medical treatment for 6 months. A non-contrast computerised tomography (NCCT) of nose and paranasal sinuses was done which was suggestive of B/L panpolyposis. (Figure 3, 4 & 5).

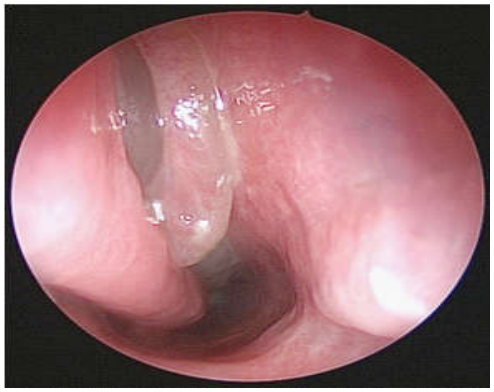

Fig. 1: Endoscopic view of right nasal cavity showing polypoidal tissue in the right ostiomeatal complex and DNS to right

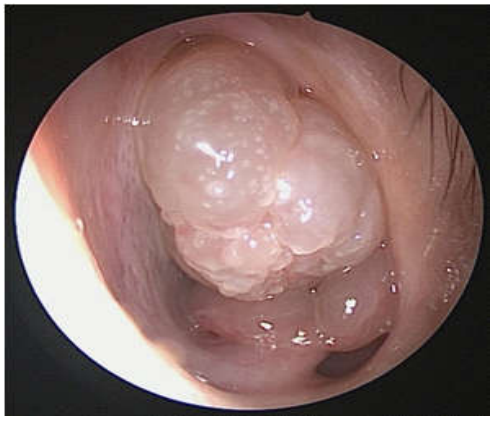

Fig. 2: Endoscopic view of left nasal cavity showing polypoidal tissue almost filling the entire nasal cavity

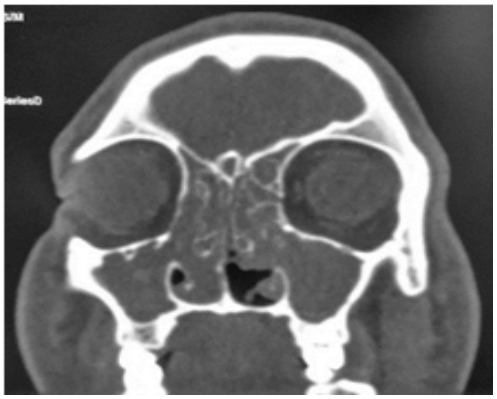

Fig. 3: NCCT nose and paranasal sinuses coronal view showing bilateral maxillary sinus, frontal sinus and anterior ethmoids haziness

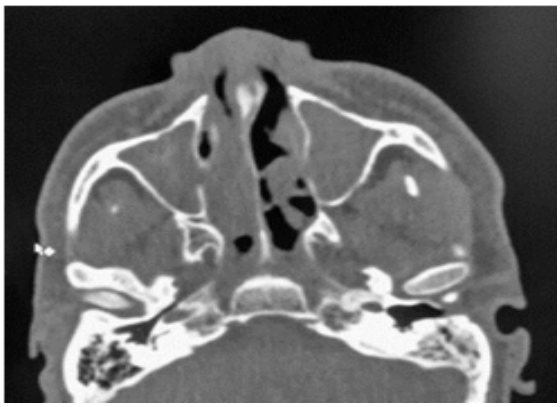

Fig. 4: NCCT nose and paranasal sinuses axial view showing bilateral maxillary sinus haziness

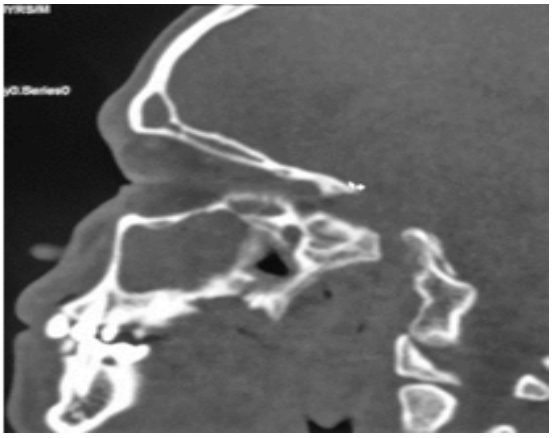

Fig. 5: NCCT nose and paranasal sinuses sagittal view showing maxillary sinus haziness

Patient was investigated and planned for FESS. During the FESS surgery, right side was uneventful. On left side, uncinectomy was performed and ethmoid bulla opened. The principle maxillary sinus ostiumcould not be identified in its normal location and wasidentified after rigorous effort, atextreme posterior tip of ethmoid infundibulum (Figure 6).

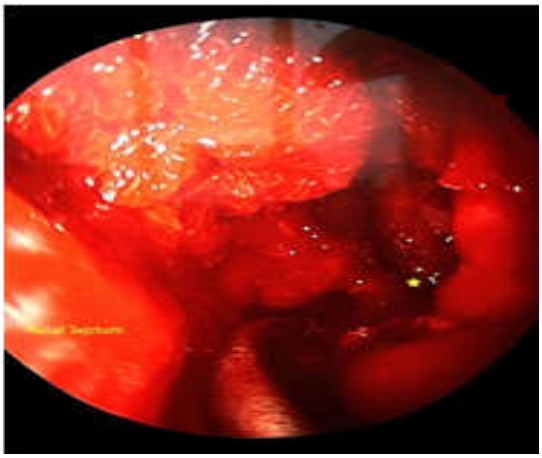

Fig. 6: Intra operative picture showing abnormal position of maxillary sinus opening

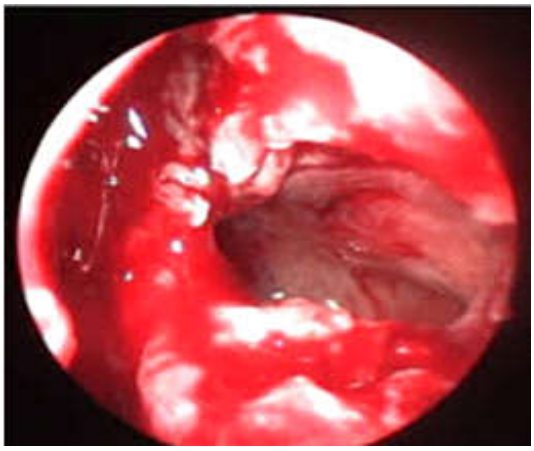

Fig. 7: Endoscopic picture showing abnormal position of maxillary sinus opening (3rdPost operative day)

MMA was performed which was followed by severe haemorrhage due to trauma to branch of sphenopalatine artery as the principle maxillary sinus ostium was located at posterior tip of ethmoid infundibulum. Haemostasis was attained using adrenaline packing and gel foam. Anterior ethmoidectomy, partial middle turbinate reduction and posterior ethmoidectomy was done, entire diseased polypoidal mucosa was removed. Conventional nasal packingwas done with soframycin soaked ribbon gauze. Pack was removed after 48hours, postoperative period was uneventful. (Figure 7) Patient was discharged on 3rd day of surgery and is under regular follow up.

Discussion

The anatomy of maxillary ostium is highly variable in size, shape and position. The primary maxillary ostium may be found at any point along the course of the ethmoid infundibulum. Van alyea reported the maxillary sinus ostia in the superior third of the infundibulum in 10%, the middle third in 25%, and the inferior third in 65% of cases [3]. Lang et al. (1982) divided ethmoidal infundibulum into four parts by drawing three lines at equal distances. Maxillary sinus ostium located in anterior division in 22% cases, second division in 28% cases, third division in 48% cases and posterior division in 2% cases [4]. Our case falls into the posterior division and hence was rare.

Locating the natural maxillary ostium is paramount to avoid false surgical ostium formation which can lead to mucociliary recirculation and failure of surgery [5]. Maxillary sinus ostium is clearly visible after performing uncinectomy. If maxillary ostia is not visualised, palpate the lateral wall of nose using maxillary cannula. Cannula should be passed along the superior attachment of inferior turbinate keeping the direction of cannula tip antero inferiorly. While doing this, cannula usually slips into and engages into the natural maxillary ostium. 30^0/ 70^0 endoscope is preferred to visualise the ostium [2].

In some cases of chronic rhinosinusitis, due to pathological inflammation, there will be closure of natural maxillary ostium [6] and accessory maxillary sinus ostium is seen in 30% of patients with chronic rhinosinusitis [7]. So, in cases where natural maxillary sinus ostium is not identified in normal position, accessory ostium needs to be ruled out. The rate of anatomical variations in nasal structures is reported to be between 64.9 and 80% [8].

Middle meatal antrostomycan be done in two ways. One way in posterior direction by resection of posterior fontanelle and another way isin anteroinferior direction by resection of anterior fontanelle. Sphenopalatine artery enters the lateral wall of nose through sphenopalatine foramen posterior to maxillary ostium. Excessive widening of ostium in posterior direction leads to injury to sphenopalatine artery or its branches. Especially in cases where the anatomical location of natural maxillary ostium is in posterior division of infundibulum, chances of injury to sphenopalatine artery or its branches are higher during MMA which happened in our case.

Conclusion

Although maxillary sinus ostium location in posterior division is rare, its identification is important both preoperatively and intraoperatively, because during MMA in these cases, chances of injury to sphenopalatine artery are high which can lead to severe bleeding.

References

1. May M, Sobol SM, Korzec K: The location of the maxillary os and its importance to the endoscopic sinus surgeon. Laryngoscope 1990;100(10): 1037–42.
2. A.P Singh, Atlas and comprehensive review of basic, clinical and surgical considerations, Aditya medical publishers, New Delhi; 2002.p.25
3. Van Alyea OE: The ostium maxillare: anatomic study of its surgical accessibility. Arch Otolaryngol. 1936; 24:553–69.

4. Lang J, Clinical anatomy of the nose, nasal cavity and paranasal sinuses, Thieme, Newyork,. 1989.pp. 72-74.

5. Jessica Bewick, Francesco M. Egro, Liam Masterson, Amin R. Javer, Carl M. Philpott: Anatomic findings in revision endoscopic sinus surgery: Case series and review of contributory factors. Allergy Rhinol 1016;7:e151–e157.

6. Marco Capelli, Patrizia Gatti. Radiological Study of Maxillary Sinus using CBCT: Relationship between Mucosal Thickening and Common Anatomic Variants in Chronic Rhinosinusitis. Journal of Clinical and Diagnostic Research. 2016 Nov;10(11):MC07-MC10.

7. Joe JK, Ho SY, Yanagisawa E. Documentation of variations in sinonasal anatomy by intraoperative nasal endoscopy. Laryngoscope 2000;110:229–35.

8. Prasad S., Varshney S., Bist SS, Mishra S, and Kabdwal N. Correlation Study Between Nasal Septal Deviation and Rhinosinusitis. Indian J Otolaryngol Head Neck Surg. 2013 Dec;65(4):363–66.

Case Report

Otolaryngology International
Volume 3 Number 1, January - June 2018

Interesting Case of an Atypical Aural Polyp

Nitin Ravindra Ankale*, P.R. Malur, Utkarsh Anand**, Rajesh R. Havaldar***, Ashutosh Prasad*****

Author Affiliation: *Professor ***Post Graduate, Dept. of ENT & HNS **Professor, Dept. of Pathology, Jawaharlal Nehru Medical College, KLE University, Nehru Nagar, Belagavi, Karnataka 590010, India.

Corresponding Author: N.R. Ankle, Professor, Dept. of ENT & HNS, Jawaharlal Nehru Medical College, KLE University, Nehru Nagar, Belagavi, Karnataka 590010, India.
E-mail: nitinankale@yahoo.co.uk

Received on: 24.04.2018, **Accepted on:** 22.05.2018

Abstract

Objective: The purpose of this study is to present a plethora of variations in the presentation of glomusjugulare and a review of current understanding of glomustumour. *Method:* A clinical case has been used to demonstrate the history and physical examination in diagnosing the various conditions which can present as a bleeding aural polyp. *Results:* A glomus tumour can present as an aural polyp mimicking squamosal otitis media. Great degree of clinical suspicion and awareness is needed in the diagnosis and management of this condition.

Keywords: Aural Polyp; Chronicsuppurative Otitis Media; Middle Ear Mass; Glomusjugulare.

Introduction

Aural polyp can be a most common presenting feature of CSOM of both mucosal and squamosal type. In squamosal type it is known to cause erosion of vital structures like the facial nerve, inner ear and intra-cranial components developing in response to long standing inflammatory process which results in proliferation of granulation tissue with chronic inflammatory cells. It is usually solitary, polypoidal with reddish surface and often friable. Whereas in mucosal type it is pale, pinkish, non-friable, painless mass.

There is a significant association between cholesteatoma and aural polyp arising from attic or postero superior marginal tympanic defects. The incidence of cholesteatoma associated with aural polyp varies from 25 percent to 45 percent (Veitch et al., 1988; Milroy et al., 1989; Rhys Williams et al., 1989; Gliclick et al., 1993). Other causes that may lead to aural polyp are granulomatous diseases like tuberculosis, syphilis, fungal and protozoal infection.

Conditions that may present as an aural polyp through a tympanic membrane perforation are an enlarging glomusjugulare tumour, middle ear adenoma and facial nerveneurinoma (okabe et al., 1992).

Case History

A 48 year old female patient presented with right ear discharge and reduced hearing since 1 year. She also complained of pain and fullness over the right ear since 1 month. Ear discharge was mucoid initially then became purulent, foul smelling and occasionally blood tinged since 2 months. Pain was gradual in onset diffuse dull aching over mastoid region.

There was no history of ringing sensation, giddiness/vertigo or nystagmus. She did not give any history of lower cranial nerve involvement like facial weakness, hoarseness of voice.

Endocrinal symptoms were absent. She took treatment from a local doctorwith no relief and later was referred to our centre. On examination we found out a painless non pulsatile pale pink mass with mucoid discharge in the right earwhich did not bleed

on touch and could be probed all around, tympanic Membrane could not be visualised Tuning fork tests showed Right sided moderate degree conductive hearing loss.

No abnormality was seen in Left ear clinically.

There was no nystagmus. On siegalization no blanching was seen over the mass and no signs of lower cranial nerve involvement.

Nose and Throat were clinically normal.

Routine haematological investigations were normal.

On Pure tone audiometry, right side showed moderate degree conductive hearing loss of 45 dB

X-ray mastoid schullers view showed bilaterally sclerosed mastoid.

Multi detector computed tomography **(**MDCT) done at another centre suggested Right Oto-Mastoiditis with Aural polyp

Suspecting a polyp Biopsy was done under local anaesthesia. However it was associated with moderate amount of bleeding, giving the first signs of possibility of a vascular mass.

24 hr urine VMA level was in the normal range (3-4 mg/day) However HPR report showed features suggestive of cholesteatoma rather than a paraganglioma.

High resolution computed tomography was done which showed a minimally enhancing soft tissue lesion measuring 1.4cm X .5 cm in right ear canal. Erosion of anterior wall of bony canal was noted measuring 5.0 mm. Opacification of middle air space was noted. Final impression was Right Otomastoiditis and Aural polyp.

Surgical excision of mass was planned.

Patient was taken under GA with oral intubation.

Postauralincision was taken.

Periosteum elevated

Meatotomy was done and pale greyish mass was visualised in EAC. Osteomeatal Flap was elevated. Posterior Bony Meatal wall was intact except posterosuperior and attic regions. Mass was seen completely occupying the middle ear and obliterating tympanic cavity. Mastoid was opened.

Sclerotic bone was encountered however no evidence of cholesteatoma, granulations tissue was seen. We delineated the extent of mass in all directionsby curetting and dissection (Figure 1).

Soft tissue mass was dissected away from aditus ad antrum, attic & promontory with side knife and cotton balls.Tumour was excised in toto. (Figure 2).

Malleus and Incus were absent.

Graft was placed and myringostapediopexy repair was done.

Bleeding was controlled with gelfoam and medicated ribbon guaze.

Hence a mass of 1.2 cm X 0.5 cm was removed intoto successfully (Figure 3). Blood loss was about 100 ml. Final Histopathological report showed capillaries blending with the glomus cells, suggesting a diagnosis of glomus tumour (Figure 4). Post-operative follow-up of the patient at 1 year has shown no recurrence.

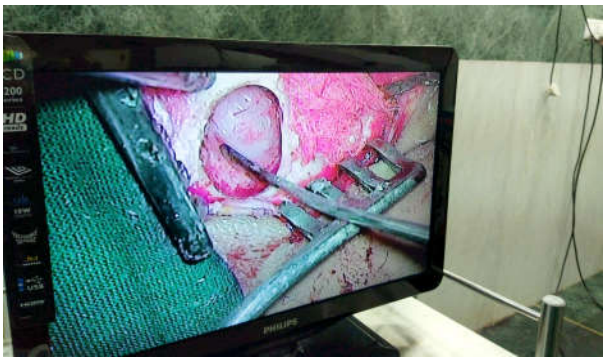

Fig. 1: Soft tissue mass being dissected

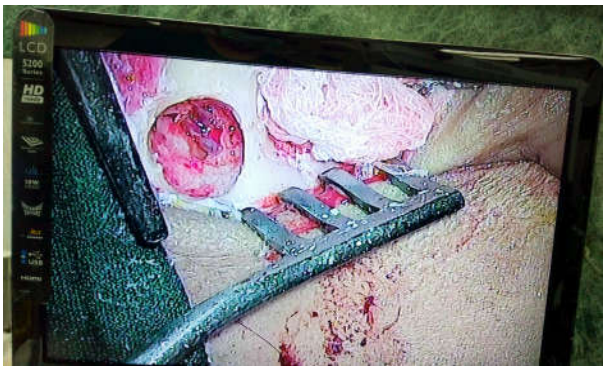

Fig. 2: Tumour excised in toto

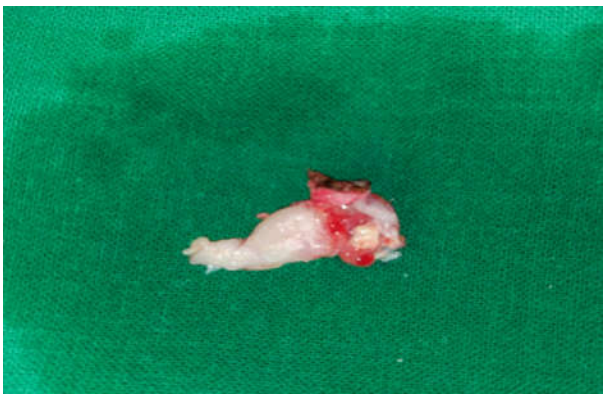

Fig. 3: Mass of 1.2cm *0.5cm removed in toto

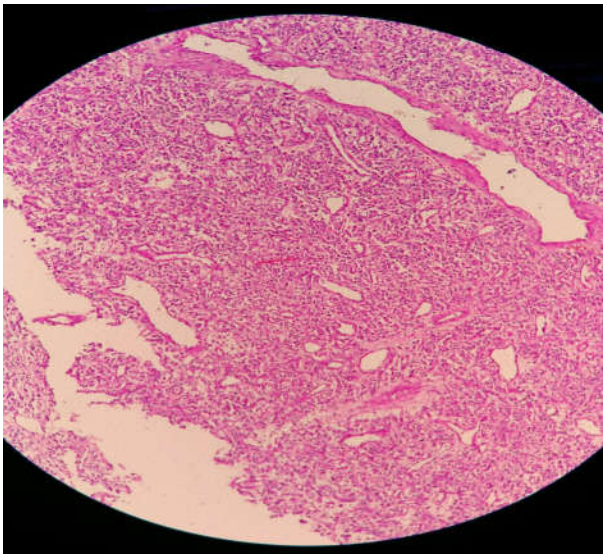

Fig. 4: Hpr shows capillaries blending with glomus cells

Discussion

The description and term glomusjugularis is credited to Guild, who, in 1941 described existence of glomus body in the ear. Rosenwasser in 1945, was the first to attempt radical removal of a glomus-tumour [8].

Glomus tumour term has been used to refer to paraganglioma of head and neck region since a long time. They are a group of cells associated with vascular and neuronal adventitia found throughout the body. They originate from neural crest cells and are related to autonomic nervous system. When they arise near adventitia of jugular bulb they are termed glomus jugulare, along course of Jacobson nerve and involving promontory they are termed glomustympanicum along the vagus nerve, glomusvagale. They may also be termed as paraganglioma along with the region they occur, for example tympanojugular-paraganglioma [1-4].

Glomus tumours are benign, hyper vascular-tumours with a prolonged insidious growth. They have an estimated incidence of one per 1.3 million population with 1-5% of cases turning out to be malignant. Glomus tumours of ear happen to be second most common neurotological tumour after acoustic neuromas [1-3].

They occur four to six times more commonly in females than in males, with a peak age of of presentation after 4th and 5th decade of life. A left-sided preponderance is also reported [2-4]. They may be sporadic or familial. Familial cases appear at a younger age group [3].

Around 25%–35% of paragangliomas may be associated with recognized genetic defects, most of which are due to hereditary transmission.

Most common symptoms are conductive hearing loss, pulsatile tinnitus, otalgia, lower cranial nerve palsies [3-7]. Very rarely it may extend into ear canal and present as a polyp and can be associated with otorrhoea due to secondary infections as in our case [3]. It may be associated with Aquino's sign and Brown's sign. On examination, the hallmark of a jugulotympanicglomus tumour is a reddish-blue mass seen posterosuperiorly behind the tympanic membrane and is called the rising sun sign. None of these signs were elicited in our case.

Fisch classification and glasscock and Jackson classification are popular available classifications. According to glasscock-Jackson classification our case was type 4 tumour i.e. tumour spreading into external auditory canal [1,9].

Histologically the glomus tumour may consist of type I or chief cells with cytoplasmic granules containing catecholamine's and type II or Schwann like satellite cells. They are arranged in classic zellballen (cellball) configuration consisting of chief cells surrounded by fibrovascular stroma with thin walled capillaries and sustentacular cells. Sometimes the mass may be covered with squamous epithelium giving false impression of cholesteatomaas it happened in our case [3,10].

Secretion of catecholamine's (functional tumours) leading to endocrinal symptoms may occur in 1%-3% of cases.

HRCT is very valuable in diagnosis showing the location, extent or bony erosions of jugulotympanicglomustumours. MRI is better for delineating the tumor edges. However both may not reveal the nature of mass. Angiography can help in knowing the feeding vessel of the tumour [3,10]. Due to financial constraints MRI and angiography could not be done in this patient.

Several middle ear pathologies can extend into external auditory canal e.g., cholesteatomas, glomus tumours, meningioma, squamous cell carcinoma, tuberculosis, mucosal adenoma, encephalocoele etc. [10]. They should be included in the differential diagnosis of polyps in the EAC. Although these lesions have very rare occurrence and many surgeons believe them to be anecdotal. Our case study reveals an aural polyp with otitis media like presenting features turning out to be a glomus tumour in final histopathological diagnosis. This is alarming as an unsuspecting clinician may misdiagnose the case.

HRCT is very commonly used in the workup of the patients but it gives very few clues about the nature of mass. MRI is not routinely used in otitis media patients although it may help in diagnosis glomus tumour more effectively. Clinical presentation and examination findings are main pointers in the diagnosis of cholesteaotomatous otitis media. They may be commonly associated with polyp growth. However the results of our present study reveals that a glomus tumour may masquerade as an aural polyp with otitis media. High degree of clinical suspicion and awareness is needed for appropriate management of such cases [8-10].

Conclusion

Aural polyp is one of the common presentation in otologic disease. Whenever we come across an atypical aural polpy, all the various conditions should be considered with high degree of suspicion so as not to miss the diagnosis.

Tympanic jugular glomus tumours can present as an aural polyp with otitis media. HRCT may not be able to generate enough evidence in diagnosing them, and biopsy can be hazardous. Great degree of clinical suspicion and awareness is needed for appropriate management and diagnosis of these cases.

References

1. Oldring D, Fish U. Glomus tumours of temporal bone: Surgical therapy. Am J Otol 1979;1:7-18.
2. Jackson CG, Glasscock ME, Harris PF. Glomus tumors. Diagnosis, classification, and management of large lesions. Arch Otolaryngol 1982;108:401-10.
3. Sanna M, Jain Y, De Donato G, Rohit, Lauda L, Taibah A. Management of jugular paragangliomas: the Gruppo Otologico experience. OtolNeurotol 2004;25(5):797–804.
4. Brewis C, Bottrill ID, Wharton SB, Moffat DA. Metastases from glomus jugulare tumours. J Laryngol Otol 2000;114:17-23.
5. Manolidis S, Shohet JA, Jackson CG, Glasscock ME 3rd. Malignant glomus tumors. Laryngoscope 1999;109:30-4.
6. Jansen JC, van den Berg R, Kuiper A, van der MeyAG, Zwinderman AH, Cornelisse CJ. Estimatiion of growth rate inpatients with head and neck paragangliomas influences the treatment proposal. Cancer 2000;88:2811-6.
7. Netterville JL, Jackson CG, Miller FR, Wanamaker JR, Glasscock ME. Vagal paraganglioma: A review of 46 patients treated during a 20-year period. Arch Otolaryngol Head NeckSurg 1998;124:1133-40.
8. Karas DE, Kwartler JA. Glomustumours : a fifty year historical perspective. Am J Otol 1993;14:495-500.
9. Jackson CG, Glasscock ME, Harris PF. Glomus-tumours: Diagnosis, classification and management of large lesions. Otolaryngol 1982;08:401-6.
10. John Xenellis, Katerina Mountriha, Pavlos Maragoudakis, Dimitrios Kandiloros. A histological examination in the cases of initial diagnosis as chronic otitis media with a polypoid mass in the external ear cana. Auris Nasus Larynx 2011;38: 325–328.

Guidelines for Authors

Manuscripts must be prepared in accordance with "Uniform requirements for Manuscripts submitted to Biomedical Journal" developed by international committee of medical Journal Editors.

Types of Manuscripts and Limits

Original articles: Up to 3000 words excluding references and abstract and up to 10 references.

Review articles: Up to 2500 words excluding references and abstract and up to 10 references.

Case reports: Up to 1000 words excluding references and abstract and up to 10 references.

Online Submission of the Manuscripts

Articles can also be submitted online from http://rfppl.co.in/customer_index.php.

I) First Page File: Prepare the title page, covering letter, acknowledgement, etc. using a word processor program. All information which can reveal your identity should be here. use text/rtf/doc/PDF files. Do not zip the files.

2) Article file: The main text of the article, beginning from Abstract till References (including tables) should be in this file. Do not include any information (such as acknowledgement, your name in page headers, etc.) in this file. Use text/rtf/doc/PDF files. Do not zip the files. Limit the file size to 400 Kb. Do not incorporate images in the file. If file size is large, graphs can be submitted as images separately without incorporating them in the article file to reduce the size of the file.

3) Images: Submit good quality color images. Each image should be less than 100 Kb in size. Size of the image can be reduced by decreasing the actual height and width of the images (keep up to 400 pixels or 3 inches). All image formats (jpeg, tiff, gif, bmp, png, eps etc.) are acceptable; jpeg is most suitable.

Legends: Legends for the figures/images should be included at the end of the article file.

If the manuscript is submitted online, the contributors' form and copyright transfer form has to be submitted in original with the signatures of all the contributors within two weeks from submission. Hard copies of the images (3 sets), for articles submitted online, should be sent to the journal office at the time of submission of a revised manuscript. Editorial office: Red Flower Publication Pvt. Ltd., 48/41-42, DSIDC, Pocket-II, Mayur Vihar Phase-I, Delhi – 110 091, India, Phone: 91-11-22754205, 45796900, 22756995. E-mail: author@rfppl.co.in. Submission page: http://rfppl.co.in/article_submission_system.php?mid=5.

Preparation of the Manuscript

The text of observational and experimental articles should be divided into sections with the headings: Introduction, Methods, Results, Discussion, References, Tables, Figures, Figure legends, and Acknowledgment. Do not make subheadings in these sections.

Title Page

The title page should carry

1) Type of manuscript (e.g. Original article, Review article, Case Report)
2) The title of the article, should be concise and informative;
3) Running title or short title not more than 50 characters;
4) The name by which each contributor is known (Last name, First name and initials of middle name), with his or her highest academic degree(s) and institutional affiliation;
5) The name of the department(s) and institution(s) to which the work should be attributed;
6) The name, address, phone numbers, facsimile numbers and e-mail address of the contributor responsible for correspondence about the manuscript; should be mentoined.
7) The total number of pages, total number of photographs and word counts separately for abstract and for the text (excluding the references and abstract);
8) Source(s) of support in the form of grants, equipment, drugs, or all of these;
9) Acknowledgement, if any; and
l0) If the manuscript was presented as part at a meeting, the organization, place, and exact date on which it was read.

Abstract Page

The second page should carry the full title of the manuscript and an abstract (of no more than 150 words for case reports, brief reports and 250 words for original articles). The abstract should be structured and state the Context (Background), Aims, Settings and Design, Methods and Materials, Statistical analysis used, Results and Conclusions. Below the abstract should provide 3 to 10 keywords.

Introduction

State the background of the study and purpose of the study and summarize the rationale for the study or observation.

Methods

The methods section should include only information that was available at the time the plan or protocol for the study was written such as study approach, design, type of sample, sample size, sampling technique, setting of the study, description of data collection tools and methods; all information obtained during the conduct of the study belongs in the Results section.

Reports of randomized clinical trials should be based on the CONSORT Statement (http://www.consort-statement. org). When reporting experiments on human subjects, indicate whether the procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional or regional) and with the Helsinki Declaration of 1975, as revised in 2000 (available at http://www.wma.net/e/policy/l 7-c_e.html).

Results

Present your results in logical sequence in the text, tables, and illustrations, giving the main or most important findings first. Do not repeat in the text all the data in the tables or illustrations; emphasize or summarize only important observations. Extra or supplementary materials and technical details can be placed in an appendix where it will be accessible but will not interrupt the flow of the text; alternatively, it can be published only in the electronic version of the journal.

Discussion

Include summary of key findings (primary outcome measures, secondary outcome measures, results as they relate to a prior hypothesis); Strengths and limitations of the study (study question, study design, data collection, analysis and interpretation); Interpretation and implications in the context of the totality of evidence (is there a systematic review to refer to, if not, could one be reasonably done here and now?, What this study adds to the available evidence, effects on patient care and health policy, possible mechanisms)? Controversies raised by this study; and Future research directions (for this particular research collaboration, underlying mechanisms, clinical research). Do not repeat in detail data or other material given in the Introduction or the Results section.

References

List references in alphabetical order. Each listed reference should be cited in text (not in alphabetic order), and each text citation should be listed in the References section. Identify references in text, tables, and legends by Arabic numerals in square bracket (e.g. [10]). Please refer to ICMJE Guidelines (http://www.nlm.nih.gov/bsd/uniform_requirements.html) for more examples.

Standard journal article

[1] Flink H, Tegelberg Å, Thörn M, Lagerlöf F. Effect of oral iron supplementation on unstimulated salivary flow rate: A randomized, double-blind, placebo-controlled trial. J Oral Pathol Med 2006; 35: 540-7.

[2] Twetman S, Axelsson S, Dahlgren H, Holm AK, Källestål C, Lagerlöf F, et al. Caries-preventive effect of fluoride toothpaste: A systematic review. Acta Odontol Scand 2003; 61: 347-55.

Article in supplement or special issue

[3] Fleischer W, Reimer K. Povidone iodine antisepsis. State of the art. Dermatology 1997; 195 Suppl 2: 3-9.

Corporate (collective) author

[4] American Academy of Periodontology. Sonic and ultrasonic scalers in periodontics. J Periodontol 2000; 71: 1792-801.

Unpublished article

[5] Garoushi S, Lassila LV, Tezvergil A, Vallittu PK. Static and fatigue compression test for particulate filler composite resin with fiber-reinforced composite substructure. Dent Mater 2006.

Personal author(s)

[6] Hosmer D, Lemeshow S. Applied logistic regression, 2nd edn. New York: Wiley-Interscience; 2000.

Chapter in book

[7] Nauntofte B, Tenovuo J, Lagerlöf F. Secretion and composition of saliva. In: Fejerskov O, Kidd EAM,

editors. Dental caries: The disease and its clinical management. Oxford: Blackwell Munksgaard; 2003. p. 7-27.

No author given

[8] World Health Organization. Oral health surveys - basic methods, 4th edn. Geneva: World Health Organization; 1997.

Reference from electronic media

[9] National Statistics Online—Trends in suicide by method in England and Wales, 1979-2001. www.statistics.gov.uk/downloads/theme_health/HSQ 20.pdf (accessed Jan 24, 2005): 7-18. Only verified references against the original documents should be cited. Authors are responsible for the accuracy and completeness of their references and for correct text citation. The number of reference should be kept limited to 20 in case of major communications and 10 for short communications.

More information about other reference types is available at www.nlm.nih.gov/bsd/uniform_requirements.html, but observes some minor deviations (no full stop after journal title, no issue or date after volume, etc).

Tables

Tables should be self-explanatory and should not duplicate textual material.

Tables with more than 10 columns and 25 rows are not acceptable.

Table numbers should be in Arabic numerals, consecutively in the order of their first citation in the text and supply a brief title for each.

Explain in footnotes all non-standard abbreviations that are used in each table.

For footnotes use the following symbols, in this sequence: *, ¶, †, ‡‡,

Illustrations (Figures)

Graphics files are welcome if supplied as Tiff, EPS, or PowerPoint files of minimum 1200x1600 pixel size. The minimum line weight for line art is 0.5 point for optimal printing.

When possible, please place symbol legends below the figure instead of to the side.

Original color figures can be printed in color at the editor's and publisher's discretion provided the author agrees to pay.

Type or print out legends (maximum 40 words, excluding the credit line) for illustrations using double spacing, with Arabic numerals corresponding to the illustrations.

Sending a revised manuscript

While submitting a revised manuscript, contributors are requested to include, along with single copy of the final revised manuscript, a photocopy of the revised manuscript with the changes underlined in red and copy of the comments with the point to point clarification to each comment. The manuscript number should be written on each of these documents. If the manuscript is submitted online, the contributors' form and copyright transfer form has to be submitted in original with the signatures of all the contributors within two weeks of submission. Hard copies of images should be sent to the office of the journal. There is no need to send printed manuscript for articles submitted online.

Reprints

Journal provides no free printed reprints, however a author copy is sent to the main author and additional copies are available on payment (ask to the journal office).

Copyrights

The whole of the literary matter in the journal is copyright and cannot be reproduced without the written permission.

Declaration

A declaration should be submitted stating that the manuscript represents valid work and that neither this manuscript nor one with substantially similar content under the present authorship has been published or is being considered for publication elsewhere and the authorship of this article will not be contested by any one whose name (s) is/are not listed here, and that the order of authorship as placed in the manuscript is final and accepted by the co-authors. Declarations should be signed by all the authors in the order in which they are mentioned in the original manuscript. Matters appearing in the Journal are covered by copyright but no objection will be made to their reproduction provided permission is obtained from the Editor prior to publication and due acknowledgment of the source is made.

Approval of Ethics Committee

We need the Ethics committee approval letter from an Institutional ethical committee (IEC) or an institutional review board (IRB) to publish your Research article or author should submit a statement that the study does not require ethics approval along with evidence. The evidence could either be consent from patients is available and there are no ethics issues in the paper or a letter from an IRB stating that the study in question does not require ethics approval.

Abbreviations

Standard abbreviations should be used and be spelt out when first used in the text. Abbreviations should not be used in the title or abstract.

Checklist

- Manuscript Title
- Covering letter: Signed by all contributors
- Previous publication/ presentations mentioned, Source of funding mentioned
- Conflicts of interest disclosed

Authors

- Middle name initials provided.
- Author for correspondence, with e-mail address provided.
- Number of contributors restricted as per the instructions.
- Identity not revealed in paper except title page (e.g.name of the institute in Methods, citing previous study as 'our study')

Presentation and Format

- Double spacing
- Margins 2.5 cm from all four sides
- Title page contains all the desired information. Running title provided (not more than 50 characters)
- Abstract page contains the full title of the manuscript
- Abstract provided: Structured abstract provided for an original article.
- Key words provided (three or more)
- Introduction of 75-100 words
- Headings in title case (not ALL CAPITALS). References cited in square brackets
- References according to the journal's instructions

Language and grammar

- Uniformly American English
- Abbreviations spelt out in full for the first time. Numerals from 1 to l0 spelt out
- Numerals at the beginning of the sentence spelt out

Tables and figures

- No repetition of data in tables and graphs and in text.
- Actual numbers from which graphs drawn, provided.
- Figures necessary and of good quality (color)
- Table and figure numbers in Arabic letters (not Roman).
- Labels pasted on back of the photographs (no names written)
- Figure legends provided (not more than 40 words)
- Patients' privacy maintained, (if not permission taken)
- Credit note for borrowed figures/tables provided
- Manuscript provided on a CDROM (with double spacing)

Submitting the Manuscript

- Is the journal editor's contact information current?
- Is the cover letter included with the manuscript? Does the letter:

1. Include the author's postal address, e-mail address, telephone number, and fax number for future correspondence?
2. State that the manuscript is original, not previously published, and not under concurrent consideration elsewhere?
3. Inform the journal editor of the existence of any similar published manuscripts written by the author?
4. Mention any supplemental material you are submitting for the online version of your article. Contributors' Form (to be modified as applicable and one signed copy attached with the manuscript)

SUBSCRIPTION FORM

I want to renew/subscribe international class journal **"Otolaryngology International"** of Red Flower Publication Pvt. Ltd.

Subscription Rates:
• Institutional: INR5500/USD430

Name and complete address (in capitals): _____

_____

Payment detail:
Online payment link: http://rfppl.co.in/payment.php?mid=15

Cheque/DD: Please send the US dollar check from outside India and INR check from India made payable to 'Red Flower Publication Private Limited'. Drawn on Delhi branch.

Wire transfer/NEFT/RTGS:
Complete Bank Account No. 604320110000467
Beneficiary Name: Red Flower Publication Pvt. Ltd.
Bank & Branch Name: Bank of India; Mayur Vihar
MICR Code: 110013045
Branch Code: 6043
IFSC Code: BKID0006043 (used for RTGS and NEFT transactions)
Swift Code: BKIDINBBDOS

Term and condition for supply of journals
1. Advance payment required by Demand Draft payable to Red Flower Publicaion Pvt. Ltd. payable at Delhi.
2. Cancellation not allowed except for duplicate payment.
3. Agents allowed 10% discount.
4. Claim must be made within six months from issue date.

Mail all orders to
Subscription and Marketing Manager
Red Flower Publication Pvt. Ltd.
48/41-42, DSIDC, Pocket-II
Mayur Vihar Phase-I
Delhi - 110 091(India)
Phone: 91-11-45796900, 22754205, 22756995, Cell: +91-9821671871
E-mail: sales@rfppl.co.in

Instructions to Authors

Submission to the journal must comply with the Guidelines for Authors.

Non-compliant submission will be returned to the author for correction.

To access the online submission system and for the most up-to-date version of the Guide for Authors please visit:

http://www.rfppl.co.in

Technical problems or general questions on publishing with OI are supported by Red Flower Publication Pvt. Ltd's Author Support team (http://rfppl.co.in/article_submission_system.php?mid=5#)

Alternatively, please contact the Journal's Editorial Office for further assistance.

Editorial Manager

Red Flower Publication Pvt. Ltd.

48/41-42, DSIDC, Pocket-II

Mayur Vihar Phase-I

Delhi - 110 091(India)

Phone: 91-11-22754205, 45796900, 22756995, Cell: +91-9821671871

E-mail: author@rfppl.co.in