Original Research Article

DOI: http://dx.doi.org/10.18203/issn.2454-5929.ijohns20173670

Prevalence and clinical features of nasal septum deviation: a study in an urban centre

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Received: 12 July 2017 Accepted: 31 July 2017

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ABSTRACT

Background: Considerably large nasal septum plays a critical role in the obstruction of the nasal cavity, leading to snoring, and other symptoms, aesthetic appearance of the nose, and increased nasal resistance. This study was performed with an aim to investigate the prevalence of nasal septum deviation in our geographical area.

Methods: 446 patients who attended the ENT department in the study period were evaluated for the nasal septum deviation. General demographic details were obtained from all of them. Detailed physical exam was performed on all the patients. Disposable nasal speculum and otoscope was used to observe the interior of the nasal cavity.

Results: Out of 446 patients visiting the ENT department of our hospital, 138 (30.9%) of them had DNS. The C shaped NSD was the most common type to be encountered in our study, with 57 patients showing this disorder. Nasal obstruction was the predominant symptom observed in 119 (86.2%) of the patients, followed by rhinitis and nasal discharge (34.8%).

Conclusions: Deviated nasal septum is a very prevalent condition in our area, with severe symptoms such as nasal obstruction and rhinitis. Most of the patients had C shaped deviated septum.

Keywords: Nasal septum deviation, C shaped deviation, S shaped deviation, Nasal obstruction

INTRODUCTION

The nasal septum comprises of bony cartilage that separated the nasal cavity into right and left sides. Having a perfectly straight nasal septum is very rare and some amount of deviation is accepted. But a considerably large nasal septum plays a critical role in the obstruction of the nasal cavity, leading to snoring, and other symptoms, aesthetic appearance of the nose, and increased nasal resistance. Therefore a proper comprehension and understanding of the nasal septum is required for proper planning and reestablishing the function so as to improve the overall cosmetic appeal.

Deviated nasal septum is of two types: anterior cartilage deformity of the quadrilateral septal cartilage which is normally caused by direct trauma or pressure. If the deviation is developmental, it is generally smooth, "C" shaped or "S" shaped ad occurs more often on the anterior septum. In case of the traumatic deviation, it is usually irregular, angulated and many times dislocated.²

This can occur at any age. The second type is a combined septal deformity which involves all the septal components. This occurs congenitally and is caused by compression across the maxilla from pressures occurring during pregnancy or parturition. Most of the time, this results in facial deformity.¹

Many a times this condition is asymptomatic. It may however cause mild nasal obstruction, rhinosinusitis, nasal discharge, facial pain, epistaxis and disturbance of smell. In case of any pathology in the sinonasalcavity, it can result in the malfunctioning of the throat and ear. In such cases, a surgery of the sinuses is indicated.³

This study was performed with an aim to investigate the prevalence of nasal septum deviation in our geographical area.

METHODS

This prospective study was conducted by the department of ENT at Mallareddy Medical College for Women and Microcare ENT Hospital and research centre, Hyderabad from Feb-2014 to Dec-2016. 446 patients who attended the ENT department in the study period were evaluated for the nasal septum deviation (NSD) study. Informed consent was obtained from all the patients. Those patients who were not interested to answer any questions were excluded from the study.

All the patients were asked questions as per the questionnaire. General demographic details were obtained from all of them. Detailed physical exam was performed on all the patients. Presence of symptoms such as itching, nasal obstruction, rhinorrhoea, sneezing was asked and noted. Disposable nasal speculum and Nasal Endoscope was used to observe the interior of the nasal cavity with proper lighting and without local anaesthetic and vasoconstructive agents. The septum was then classified as straight, C, S, caudal, sour, crust, posterior, superior etc. Computerized tomography scan and X-rays of the paranasal sinuses were advised where necessary for the detection of any sinus pathology.

The requirement of the nasal surgery was noted. A previous surgery for the NSD was also taken into consideration. The aim of this study was to observe the clinical symptoms associated with nasal septum deviation as well as the prevalence of the same in our geographical area.

RESULTS

Out of 446 patients visiting the ENT department of our hospital, 138 (30.9%) of them had DNS (Figure 1).

The number of males (52.1%) was more than the number of females (47.9%) to be affected. The most predominant age group to be affected was between 16–25 in both males and the females. However, compared to males, more number of females between the age of 26-35 was affected (Table 1).

The C shaped NSD was the most common type to be encountered in our study, with 57 patients showing this disorder. This was followed by S shaped NSD (Figure 2).

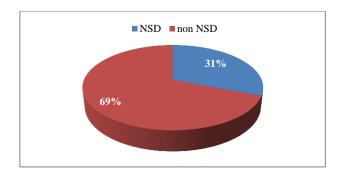


Figure 1: Prevalence of nasal septum deviation.

Table 1: Sex and age wise distribution of the patients.

Age (in years)	Males n (%)	Females n (%)	Total n (%)
6-15	3 (2.8)	2 (3.0)	5 (3.6)
16-25	35 (48.6)	25 (37.9)	60 (43.5)
26-35	17 (23.6)	20 (30.3)	37 (26.8)
36-45	11 (15.3)	11 (16.7)	22 (33.3)
46-55	5 (6.9)	7 (10.6)	12 (18.2)
>55	1 (1.4)	1 (1.5)	2 (1.4)
Total	72	66	138

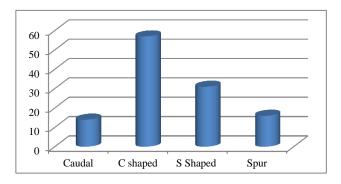


Figure 2: Types of NSD.

Nasal obstruction was the predominant symptom observed in 119 (86.2%) of the patients, followed by rhinitis and nasal discharge (34.8%). 45 (32.6%) of the patients complained of snoring and 41 (29.7%) of them had post nasal drip (Figure 3).

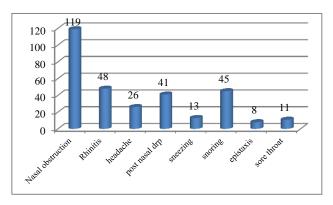


Figure 3: Clinical symptoms.

DISCUSSION

Respiratory difficulty due to deviated nasal septum is comparatively a common phenomenon but results in embarrassing clinical symptoms.⁴ A significant proportion of the population is reported to have a deviated nasal septum in varying degrees in different geographical areas. It has also been shown to occur congenitally as seen in younger children and newborn.⁵

The prevalence of NSD in our study was 31%. 68.4% of the cases were reported to have NSD in a study by Arya et al in Uttarakhand.⁶ In yet another study by Oliveira et al, a prevalence of around 60% was observed our OT which 25% were males and 23% were females. A prevalence of more males than females was seen in this study, which was in accordance to the observations of pour study, where males were more affected than females in our study.⁷ However, this was not significant

The predominant age group was 16-25 years with around 43% followed by 26-35 years (26%). In children between 6-9 years, the rate was observed to be 13.6% in a study in Korea, 21.1% of the children aged between 7-14 years showed NSD while it was 41.8% in the young adults in a study by Subaric and Mladina. 8,9 In early adults in another study it was 55%. 10 Higher prevalence rates were observed in older adults, showing that there was an increase in the rates of NSD with an increase in the age. 11

C shaped deviation was more common compared to the other types, which was closely followed by S shaped. Similar results were found in another study by Moorthy et al, where in also, C–shaped nasal septum deviation was more common followed by S shaped deviation.³

The most common complaint of patients was nasal obstruction which was seen in almost 86% of the cases, followed by nasal discharge and rhinitis in 34.8% of the cases. This was in concordance with a study by Moorthy et al, here nasal obstruction was the most common symptom observed, followed by snoring.³ In a study by Oliveira et al, rhinitis was found to be the most common symptom caused by NSD.⁷ 93% of the patients had headache as the predominant symptom in another study by Shoib et al, followed by nasal discharge (63%).¹² In another study by Singh, also head ache was the predominant symptom seen in over 80% of the cases, while in 77% of them, had nasal obstruction.¹³

CONCLUSION

Deviated nasal septum is a very prevalent condition in our area, with severe symptoms such as nasal obstruction and rhinitis. Most of the patients had C shaped deviated septum. This study enlightens the prevalence and the symptoms of nasal septum deviation. The sample size of the present study was comparatively small, and future

studies must be performed to arrive at a proper conclusion regarding the prevalence.

Funding: No funding sources Conflict of interest: None declared

Ethical approval: The study was approved by the

Institutional Ethics Committee

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Cite this article as: Sriprakash V. Prevalence and clinical features of nasal septum deviation: a study in an urban centre. Int J Otorhinolaryngol Head Neck Surg 2017;3:842-4.