

CLINICAL SPECTRUM OF NASAL DEFORMITIES IN A SELECTED POPULATION IN
NORTHERN INDIA; A CROSS SECTIONAL OBSERVATIONAL STUDYMohammad Ashraf Wani¹, Shagufta Yousuf², Showkat Hussain Tali^{2*} and Rafiq Ahmad³¹Consultant Otorhinolaryngology and Head and Neck Surgery, Health Services Kashmir.²Assistant Professor AIMSR, Bathinda Punjab.³Professor, Department of Otorhinolaryngology and Head and Neck Surgery, GMC Srinagar.

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ABSTRACT

Background: Clinical spectrum of nasal injuries and their causes in a certain population can be used as an index of population behavior and hence a tool for behavioral modifications. Aim: To look for clinical spectrum and causes of nasal deformities in Kashmiri population. **Methods:** sixty nine cases of both sexes with nasal deformities were enrolled in the study. History, clinical examination, radiological examination and nasal endoscopy (as needed) were performed and findings recorded in a predesigned proforma. **Results:** Most of the patients in our study were male (75%), in the age group of 15 to 25 years (62.5%), from rural background (80%) and from district Srinagar (37.5%). The most common chief complaint was external deformity of nose (100%) and the most common cause was the accidents (65%). Among the accidents motor vehicle accidents were the commonest (38.4%). **Conclusion:** The most common cause of nasal deformity in Kashmiri population is accidents and motor vehicle accident accounts for the maximum number of cases among the cases due to accident.

KEYWORDS: Nasal Deformities, Clinical Spectrum, Population, Trauma.

INTRODUCTION

Nose is a central and prominent structure of face. A deformity (abnormality in the appearance) of the nose can significantly change one's facial appearance or result in nasal complaints. Nasal deformity can be categorized as "cosmetic" or "functional." Cosmetic deformity of the nose results in a less desirable appearance of the nose. A functional deformity of the nose may result in frustrating nasal blockage, noisy breathing or snoring, decreased smell or taste, nose bleeds and/or recurrent sinusitis. Nasal deformity may be due to nasal trauma, congenital, nasal mass, prior surgery, medical conditions, age related or merely a person's perception.^[1] A nasal fracture, commonly referred to as a broken nose, is a fracture of one of the bones of the nose. The most common causes include assault, trauma during sports, falls, and motor vehicle collisions. Diagnosis is typically based on the signs and symptoms and may occasionally be confirmed by plain X-ray.^[2,3]

Clinical spectrum of nasal injuries and their causes in a certain population can be used as an index of population behavior and hence a tool for behavioral modifications. Hence this study was carried out to look for clinical spectrum and causes of nasal deformities in Kashmiri population where, to the best of our knowledge, no such study has been carried out so far.

MATERIAL AND METHODS

This cross sectional observational study was conducted in the post graduate Department of otorhinolaryngology and Head & Neck Surgery, GMC Srinagar, Kashmir, India. Study period was June 2005 to May 2006. Study was commenced after taking ethical clearance from hospital ethical committee and written informed consent from the patients. **Inclusion criteria:** Patient of both sexes with age > 15 years and with external deformities of nose. **Exclusion criteria:** Patients with major psychiatric diseases, with debilitating diseases like Tuberculosis, scleroderma, cardiac diseases, renal disorders, hepatitis and bleeding disorders. Relatives or friends, VIP patients, patients having unrealistic expectations and mild deformities were also excluded.

From all the patients a complete history was taken and detailed physical examination (both local and systemic) was performed. Investigations like X ray and nasal endoscopy was performed as needed. All the findings were recorded on a pre-designed proforma.

OBSERVATIONS AND RESULTS

Demographic characteristic of the study population have been depicted in table 1 and anterior rhinoscopy findings in table 2. Different causes of external deformity have been shown in table 3 and Table 4 depicts Chief Complaints of the studied population.

Table. 1: Demographic characteristic of the study population.

| Attribute | | No.(%age) | Attribute | | No.(%age) |
|-------------|--------|-----------|-----------|------------|------------|
| sex | | | Residence | Rural | 25 (62.5%) |
| | Male | 30 (75) | | Urban | 15 (37.5%) |
| | Female | 10 (25) | District | | |
| Age (years) | | | | Srinagar | 15(37.5) |
| | 15-20 | 11(27.5) | | Anantnag | 7(17.5) |
| | 21-25 | 21 (52.5) | | Baramullah | 9(22.5) |
| | 26-30 | 4 (10) | | Budgam | 6(15) |
| | 30-35 | 1(2.5) | | Doda | 2(5) |
| | 36-40 | 2 (5) | | Pulwama | 1(2.5) |
| | 41-45 | 1 (2.5) | | Kupwara | 0 (0) |

Table. 2: Anterior Rhinoscopy findings.

| Findings | Right side | Left Side | No. (%age) |
|-----------------------------------|------------|-----------|------------|
| DNS Cottle's 1 st area | 3 | 4 | 7 (17.5) |
| DNS Cottle's 2 nd area | 1 | 1 | 2 (5) |
| DNS Cottle's 3 rd area | 3 | 2 | 5 (12.5) |
| DNS Cottle's 4 th area | 3 | 2 | 5 (12.5) |
| DNS Cottle's 5 th area | 1 | 4 | 5 (12.5) |
| Hypertrophied inferior turbinate | 3 | 1 | 4 (10) |
| Hypertrophied middle turbinate | 5 | 2 | 7 (17.5) |

DISCUSSION

Most of the patients in our study were male (75%), in the age group of 15 to 25 years (62.5%), from rural background (80%) and from district Srinagar (37.5%). The most common chief complaint was external deformity of nose (100%) and the most common cause was the accidents (65%). Among the accidents motor vehicle accidents were the commonest (38.4%).

In our study the maximum number of the patients was males (n=30) with male to female ratio of 3:1 (table 1). The highest incidence in males may be related to more outdoor activities as compared to females. The sex distribution of maxillofacial trauma on a national and international level has shown 76 to 83% male preponderance as reported by Gussac et al.^[4] A male to female ratio varying from 2:1 to 4:1 was reported by Rowe and Killey,^[5] Anderson L et al^[6] and Sherer M et al.^[7]

In our study the most of the patients were between 21 to 25 years (52.5%) followed by 15 to 20 years [(27.5%; table 1]. This age group shows more activity in supports, fights, industry and high speed transportation. This age group is also more beauty conscious and is expected to report the deformities more often.

District Srinagar accounted for the maximum number of the patients (37.5%) due to central location of the hospital and easy accessibility of the patients (table 1). Being capital city of the state it has high literacy rate and higher awareness of the aesthetics. Majority of the patients were rural own to the fact that 3/4th population of Jammu and Kashmir state is rural (census 2011).^[8]

Most common cause of external deformity was trauma constituting 85% of patients (table 3). Among trauma motor vehicle accidents were seen in 38.4% followed by birth trauma (12.5%) and developmental defects (10%). This is consistent with the studies conducted by Bateman N et al^[9] and Khollar NK et al.^[10]

Table. 3: Different causes of external deformity.

| Causes | No.(%age) | Various Accidental Causes | No.(%age) |
|---------------|-----------|---------------------------|-----------|
| Developmental | 4 (10) | Motor Vehicle accident | 10 (38.4) |
| Birth Trauma | 5 (12.5) | Fall on ground | 6 (23.7) |
| Accidental | 26 (65) | Fall from upstairs | 1 (3.84) |
| Surgical | 3 (7.5) | Sports | 4 (15.38) |
| Infection | 2 (5) | Stone attack | 3 (11.5) |
| Total | 40 (100) | Blow | 2 (7.68) |

After external nasal deformity, that was reported by 100% patients, nasal obstruction and inability to get air through nose (60% each) were the most common complaints and were closely followed by trouble breathing (50%). More than one complaint was present

in most of the patients (table 4). This may be for the fact that most of the patient see a health care worker for cosmetic reasons and when present externally most often the deformities are associated with complete or partial obstruction of one or the both nostrils.

Table. 4: Chief Complaints of the studied population.

| Chief Complaints | No.(%age) |
|--|-----------|
| External deformity of nose | 40 (100) |
| Nasal blockade or obstruction | 24 (60) |
| Trouble breathing through nose | 20 (50) |
| Trouble sleep | 12 (30) |
| Unable to get air through nose during exercise | 24 (60) |

CONCLUSION

The most common cause of nasal deformity in Kashmiri population is accidents and motor vehicle accident accounts for the maximum number of cases among the cases due to accident.

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