

## Original Research Article

# Spectrum of otorhinolaryngologic ailments in the North Indian state of Punjab: a seven year retrospective study of peripheral health camps

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## ABSTRACT

**Background:** Community otorhinolaryngology services have a role to play in the early diagnosis, treatment and rehabilitation of the individuals with low socioeconomic status.

**Methods:** A retrospective study of 52 ear, nose, throat and head neck, peripheral camps held during a 7-year period, i.e. 2012-2019 was undertaken. The camps were organised by Dayanand Medical College and Hospital, Ludhiana. The epidemiological and gender profile of the patients with otorhinolaryngologic complaints was studied and statistically analysed.

**Results:** A total of 52 camps were organized over a period of 7 years (2012 to 2019). Maximum number of camps were organized in Malwa belt (49) with 65% being organized in Ludhiana city followed by Barnala and Sangrur. Maximum number of camps were organized at the religious places (44%) followed by non-governmental organizations (33%) and schools (23%). Male patients (55.7%) outnumbered the female at the camps. Out of 576 patients with nasal complaints 56.7% were male while 43.3% were female. Out of 538 patients with throat complaints 56.8% were male while 43.2% were female.

**Conclusions:** Maximum camps were held in the Malwa belt of Punjab. Otological ailments are of concern for the public. Relief and awareness from the camps of previous years brought about more attendance and request to hold more camps.

**Keywords:** Camp, Complaints, Female, Male, Nasal, Throat

## INTRODUCTION

Deafness reversible and otherwise, nasal obstruction benign or malignant, hoarseness secondary to a simple vocal nodule and a neck node, tubercular or malignant, are the common ailments that necessitate an in-depth evaluation and services of a specialist. Timely diagnosis and intervention medical or surgical as the case maybe, is the need of the hour. Peripheral grass root health care services are extended by tertiary health care facilities. In India the “medical camps” are held independently in

educational institutions or in collaboration with philanthropic non-government organizations Religious institutions are foremost in organizing these charitable camps. Specialized Oto-rhino-laryngology and head neck services are provided by the ENT specialist.

Punjab, state in North India, the land of 5 rivers now has 2 main rivers namely Satluj and Beas which divides this fertile land into 3 major belts - Majha, Malwa and Doaba. Epidemiological studies focusing on peripheral ENT health care are rare in world literature.<sup>1</sup>

Hence the current was done with the aim to determine the pattern of ENT diseases in camps held in these belts.

## METHODS

A retrospective study of 52 ear, nose, throat and head neck, peripheral camps held during a 7-year period, i.e., 2012-2019 was undertaken. The camps were organized by Dayanand Medical college and hospital, Ludhiana.

All the patients presenting in the camps with complaints of ear, nose, throat was included in this study after taking written consent from them and were examined by the specialist.

The equipment used for examination of patients included St. Clair head light, otoscope, nasal and aural speculums, tongue depressors, and the tuning forks.

The approval of local ethics committee was taken. All the camps were free health camps. No money was charged for health checkup, even medicines were distributed free of cost.

The diseases were divided into three groups - otologic (ear) diseases, rhinologic (nose) diseases, laryngologic (throat) disease.

Diagnosis was made by careful history taking and clinical examination. Details were recorded and data was analysed statistically. The data was compiled using simple descriptive methods.

- Total number of patients attending the camps and percentage of ENT cases among them.
- Places where the camps were organized
- Gender distribution of patients with ENT complaints
- Pattern of distribution of diseases among Ear, Nose and Throat.
- gender distribution of diseases among Ear, Nose and Throat.

### Statistical analysis

All statistical analysis was performed using Microsoft excel and statistical package of social sciences (SPSS)

version 17 for Microsoft windows (SPSS Inc. Released 2008. SPSS statistic for windows, version 17.0, Chicago).

## RESULTS

A total of 52 camps were organized over a period of 7 years (2012 to 2019). Maximum number of camps were organized in Malwa belt (49) with 65% being organized in Ludhiana city followed by Barnala and Sangrur.

**Table 1: Total number of camps organized according to the regional belts of Punjab.**

Belt of Punjab (n=3)	No. of camps (n=52)	Percentage (%)
<b>Malwa</b>	49	94
Ferozpur	1	1.92
Ludhiana	34	65.3
Moga	2	3.8
Barnala	5	9.6
Doraha	1	3.8
Sangrur	2	3.8
Bathinda	1	1.92
Ahmedgarh	1	1.92
Malerkotla	1	1.92
Murtsar	1	1.92
<b>Doaba</b>	2	3.8
Hoshiarpur	1	1.92
Phagwara	1	1.92
<b>Majha</b>	1	2.2
Palampur	1	1.92

Maximum number of camps were organized at the religious sites (44%) followed by non-governmental organizations (33%) and schools (23%).

**Table 2: Place where health camp organized (n=52).**

Site of camp	No. of camp	Percentage (%)
<b>Educational institutes</b>	12	23
<b>Religious sites</b>	23	44
<b>Non-governmental organizations</b>	17	33

**Table 3: Yearly distribution of organized camps.**

Year	2012	2013	2014	2015	2016	2017	2018	2019
<b>No. of camps (n=52)</b>	6	2	1	3	4	11	7	18
<b>Percentage (%)</b>	11	3.8	1.92	5.7	7.6	21	13	34

Maximum camps were held in the year 2019 i.e., 18.

Maximum patients had otologic symptoms (49%) followed by rhinologic (26.3%) and laryngeal symptoms (24.7%).

Male patients (55.7%) outnumbered the female at the camps.

Out of 1072 patients 55.1% were male while 44.9% were female.

**Table 4: Distribution of ear, nose and throat patients n=2186.**

Disease	Total number of patients	Percentage (%)
<b>Otologic (ear)</b>	1072	49%
<b>Rhinologic (nose)</b>	576	26.3%
<b>Laryngeal (throat)</b>	538	24.7%

**Table 5: Gender distribution of total patients N=2186.**

Gender	Total number of patients	Percentage (%)
<b>Male</b>	1218	55.7
<b>Female</b>	968	44.3

**Table 6: Gender distribution of ear patients N=1072.**

Gender	Total number of patients	Percentage (%)
<b>Male</b>	591	55.1
<b>Female</b>	481	44.9

**Table 7: Gender distribution of nose patients N=576.**

Gender	Total number of patients	Percentage (%)
<b>Male</b>	321	56.7
<b>Female</b>	255	43.3

Out of 576 patients with nasal complaints 56.7% were male while 43.3% were female.

**Table 8: Gender distribution of throat patients N=538.**

Gender	Total number of patients	Percentage (%)
<b>Male</b>	306	56.8
<b>Female</b>	232	43.2

Out of 538 patients with throat complaints 56.8% were male while 43.2% were female.

## DISCUSSION

McCormick et al which stated that the ear nose and throat complaints are the common problems with the patient presents to a hospital to seek treatment in the developing countries.<sup>2,3</sup>

Authors institute, a tertiary health care facility in the metropolitan city of Ludhiana with philanthropic and a patient awareness motive organized free health camps which were in the areas populated by people of low socioeconomic status, who could not afford a specialized consultation due to financial and logistic reasons. Basic medications i.e., cerumenolytic or antibiotic or steroid ear drops, decongestants nose drops, analgesics,

antihistaminic, where need be antibiotics were dispensed free of cost.

Most of the health checkups were at centres of obeisance i.e., the gurudwaras for Sikh and for the Hindus the mandirs (44%). Educational institutes (23%) and NGOs (33%) (non-governmental organizations) too held these charitable camps. A local practitioner who is respected by the public of that locality and called an RMP or a registered medical practitioner usually coordinates and assists during these camps.

This practitioner usually is trained in basic health and emergency care. Availability round the clock makes him popular amongst his locality.<sup>4,5</sup>

These practitioners are mostly employes in the different hospitals as ward boy dressers, OPD /OT technicians or ICU technicians, dressers etc.

Ailments of the ear, nose and throat have a broad spectrum ranging from simple cerumen impaction, nasal blockade, voice change to incapacitating malignancies of these regions necessitating availability of an otorhinolaryngologist with a diagnostic acumen.<sup>6</sup>

Public response at preceding year health camps was a motivation to hold more and better equipped camps in the following years. The year 2019 was the year with maximum camps being held i.e., (18/34%).

A total 2186 individuals of either gender with ENT and head neck problems underwent specialized out-patient head mirror assisted thudichum nasal, otoscopic and cervical palpation examination during the years 2012-2019 at total health camps

Otological symptoms (49%) were the commonly reported followed by nasal (26.3%) and throat (24.7%) complaints in our study. WHO too reported ear complaints as the commonest.<sup>7</sup>

A total 46% of the patients had otologic symptoms followed by rhinologic 26% and laryngeal 27% symptoms in a study conducted by Nanda et al, at Maharishi Markandeshwar Medical College and Hospital over a period of two years between December 2012 and November 2014.<sup>6</sup>

Otological symptoms predominated in the study by Emerson et al being reported as 60%, with pain and ear discharge being reported in pediatric and adult population followed by acute rhinitis due to allergy and infectious causes.<sup>8</sup>

The pattern of ENT disorders varies according to the age. With otological complaints being the commonest as described in the study by Gupta et al in their study 49.3% of the children had ear disorders with rural community being affected predominantly.<sup>9</sup>

Similar results were obtained in other studies done by Jacob et al.<sup>10</sup> Sigdel et al, Okafor et al, and Hatcher et al.<sup>11-13</sup>

Male populace attendance was 1218 patients (55.7%) age as compared to female 968 (44.3%) i.e., in the ratio of 1.2:1.

This is similar to other studies done by Emerson et al, and Nanda.<sup>6,7</sup>

Socioeconomic status, illiteracy, gender discrimination, akin to the purdah system of yester years still persists in some communities of some belts of modern Punjab thereby ladies do not visit or sometimes are not permitted to attend these free camps for checkup of their ENT issues.

The Malwa belt on either side of our institution was widely covered and maximum camps 49 (94%) were held in Ludhiana 34 (65.3%).

Being in an institute as well as a teaching medical college authors could depute only 2 persons for ENT aspect of the camp i.e., the junior most resident and ENT assistant to join the team participating in the camp thereby a basic ear nose throat and head and neck examination with record keeping could be done.

## CONCLUSION

Maximum camps were held in the Malwa belt of Punjab Religious institutes participated the most. Otological ailments are of concern for the public. Male patients outnumbered the females. Relief and awareness from the camps of previous years brought about more attendance and request to hold more camps.

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