

A Study on Epidemiology and Demographic Profile of Dacryocystitis in Patients at Tertiary Care Centre Jharkhand

Dr. Nishtha Mishra¹, Dr. Rahul Prasad², Dr. Kumari Priyanka Verma³, Dr. Nitish Kumar Marshal⁴

¹Junior Resident, RIO, RIMS, Ranchi

²Associate Professor, RIO, RIMS, Ranchi

³Junior Resident, RIO, RIMS, Ranchi

⁴Junior Resident, RIO, RIMS, Ranchi

Abstract: **Introduction:** Dacryocystitis is the inflammation of the lacrimal sac which usually occurs because of NLD obstruction. Several epidemiological studies have been carried out in the past with a focus on epidemiology of acute and chronic dacryocystitis, but there is a dearth of literature from the India. **Method:** prospective observational study done in dept of ophthalmology for period of 12 months with 52 patients. Name, age, sex, occupation, residential distribution, i.e., rural or urban, and socioeconomic status were recorded. **Result:** The prevalence rate of dacryocystitis was 19.5 cases per 10,000 patients. The Chronic dacryocystitis (45; 86.53%) was more commonly encountered clinical type than acute dacryocystitis. **Conclusion:** The prevalence of acquired dacryocystitis was 19.5 cases per 10,000 patients. It was much more common in females of lower socioeconomic status. It is seen commonly in the 3rd to 6th decades of life.

Keywords: Dacryocystitis, lacrimal sac inflammation, NLD obstruction, prevalence rate, socioeconomic status

1. Introduction

Dacryocystitis is the inflammation of the lacrimal sac which usually occurs because of NLD obstruction. It generally affects two age groups, infant and adult females over 40 years of age. Congenital dacryocystitis is almost always chronic, while acquired dacryocystitis may be acute or chronic. Several epidemiological studies have been carried out in the past with a focus on epidemiology of acute and chronic dacryocystitis, but there is a dearth of literature from the India.

1.1 Aim

To study the prevalence and the epidemiological characteristics of the patients of acquired dacryocystitis at a tertiary eye care centre Jharkhand.

1.2 Objectives

Primary Objective: To study the prevalence of acquired dacryocystitis at a tertiary eye care centre Jharkhand.

Secondary Objective: To study epidemiological characteristics of the patients of acquired dacryocystitis at a tertiary eye care centre Jharkhand

2. Material and Methods

This study is a prospective observational study done in tertiary care centre of Jharkhand for period of 1 year from September 2022 to September 2023 with sample size of 52 patients.

Inclusion Criteria: Patients of acquired dacryocystitis, both from rural and urban population

Exclusion Criteria: Cases of congenital NLD obstruction, patients <12 years of age, and those unwilling to participate in the study were excluded

Informed consent was obtained from all the patients willing to participate in the study.

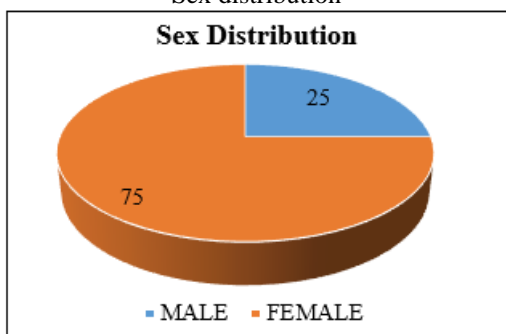
Name, age, sex, occupation, residential distribution, i.e., rural or urban, and socioeconomic status were recorded. Socioeconomic status was recorded using modified BG Prasad classification. All the patients were subjected to detailed history which included duration and nature of symptom, laterality, history of trauma, and previous medical treatment or surgical treatment. Clinical examination included tear meniscus height, position of puncta, fluorescein dye disappearance test, regurgitation on pressure over lacrimal sac, and lacrimal sac irrigation. Investigations included imaging in the form of computed tomography and dacryocystography wherever required.

Statistical Analysis

Chi-square test for the distribution was used to test the qualitative distribution. A $P < 0.05$ was considered a significant association between the variables which were tested. The statistical software SPSS 23 was used for the analysis of the data.

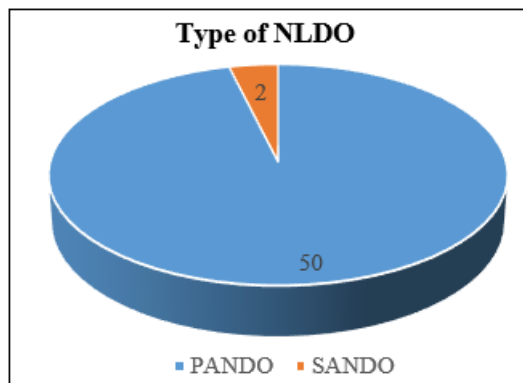
3. Observation and Results

Sex distribution



Sex	No. of Cases	Percentage
Male	13	25
Female	39	75
Total	52	100

Type of NLDO

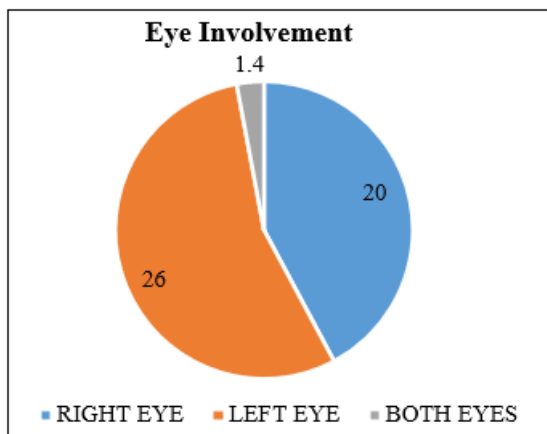


Type of NLDO	No. of Cases	Percentage
PANDO	50	96.15
SANDO	2	3.84

Epidemiological Features of Dacrocystitis

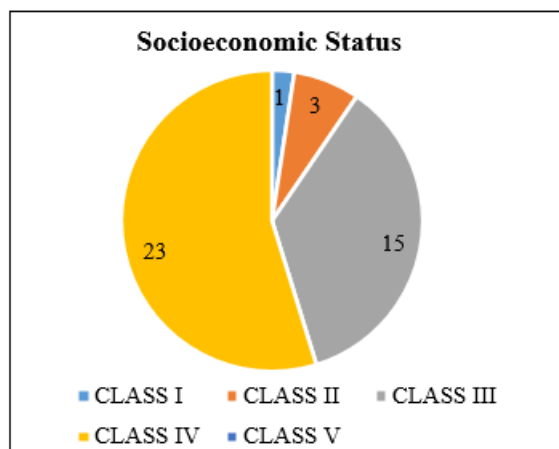
Socio- Economic Status	No. of Cases	Percentage
Class I	1	1.9
Class II and III	3 and 15	5.7 and 28.8
Class IV and V	23 and 10	44.2 and 19.2

Eye Involvement



Eye	No. of Cases	Percentage
Right Eye	20	38.4
Left Eye	26	50
Both Eyes	6	11.5

Socioeconomic Status



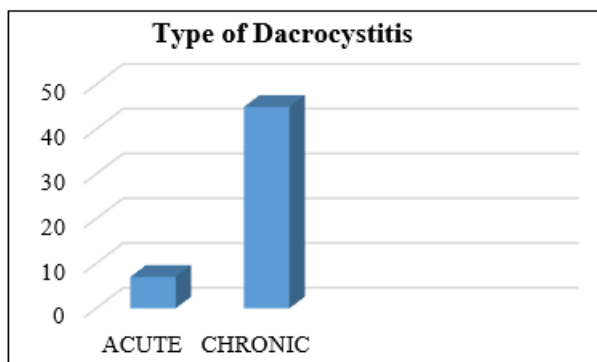
On Basis of Occupation

Occupation	No. of Cases	Percentage
Housewife	31	59.6
Laborer	5	9.6
Farmer	6	11.5
Self Employed	3	5.7
Teacher	2	3.8
Student	5	9.6

Type of dacryocystitis

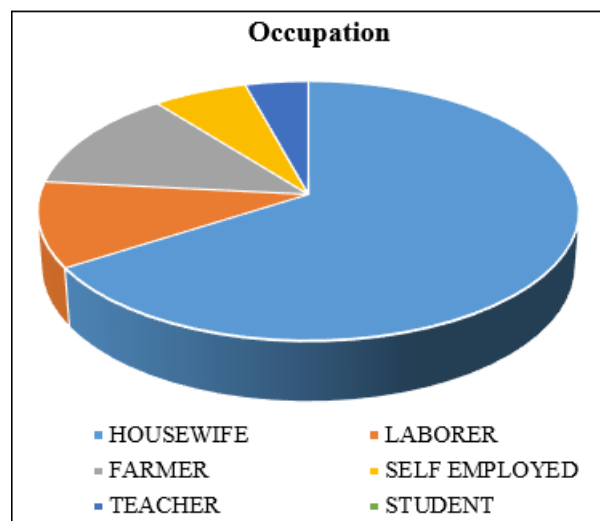
Type of Dacrocystitis	No. of Cases	Percentage
Acute	7	13.47
Chronic	45	86.53

Type of Dacrocystitis



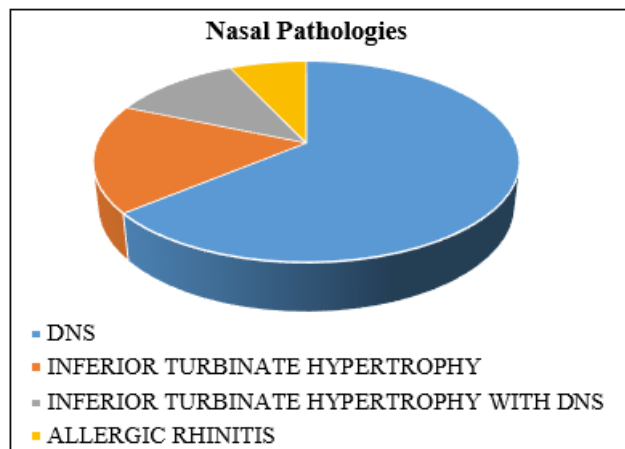
Type of nasolacrimal duct obstruction

Occupation



Nasal Pathologies Associated

Nasal Pathologies	No. of Cases	Percentage
DNS	11	21.15
Inferior Turbinate Hypertrophy	3	5.76
Inferior Turbinate Hypertrophy with DNS	2	3.84
Allergic Rhinitis	1	1.92



4. Results

The prevalence rate of dacryocystitis was 19.5 cases per 10,000 patients. The Chronic dacryocystitis (45; 86.53%) was more commonly encountered clinical type than acute dacryocystitis. Majority of cases (50; 96.15%) were due to the primary acquired nasolacrimal duct (NLD) obstruction, whereas two cases (3.84%) were due to the secondary acquired NLD obstruction. Females were more commonly affected (39; 75%). The mean age was 44.44 ± 18.95 (range: 12-86) years. Majority of the patients 26 (50.94%) belonged to 3rd-6th decades of life. The disease was more prevalent in people belonging to lower-middle socioeconomic class (23; 44.20%) living in rural areas (32; 61.32%) and the majority of them were housewives (31; 59.6%).

5. Conclusion

The prevalence of acquired dacryocystitis was 19.5 cases per 10,000 patients. It was much more common in females of lower socioeconomic status. It is seen commonly in the 3rd to 6th decades of life.

6. Discussion

Dacryocystitis is a common ocular condition which was much more common in females of lower socioeconomic status. It is seen commonly in the 3rd-6th decades of life. Females' predominance can be explained by anatomical and hormonal factors. Left-sided involvement was seen in the majority of cases which can be attributed to anatomical factors. Socioeconomic factors play a very important role as it affects awareness among people regarding nature of disease condition, ocular hygiene, occupation associated health risk, and health status of patients.

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