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Original Research Paper

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# CONGENITAL PTOSIS IN KASHMIRI POPULATION: A DEMOGRAPHIC STUDY

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**ABSTRACT**

**Purpose:** To report the demographic details of congenital ptosis.
**Design:** Retrospective study.
**Material And Method:** A retrospective single institutional study was conducted on 37 eyes of 35 patients having congenital Ptosis whose data was obtained from the hospital records.
**Results:** The mean age of presentation of congenital ptosis patients was 17.3±6.58 years, out of which 48.6% were males and 51.4 % were females. The right eye involvement was 54.3% while that of the left eye was 31.4%. 14.3% were bilateral cases.
**Conclusion:** The study conducted on 37 eyes of 35 patients revealed that the age of presentation for congenital ptosis in a majority of patients (48.6%) was 21-30years. There was equal gender predilection and right eye involvement was more common.

**KEYWORDS :** Laterality, ptosis, retrospective study.

## INTRODUCTION

Blepharoptosis is a relatively common form of eyelid malposition in children. Ptosis is considered congenital if present at birth or if it is diagnosed within the first year of life. Congenital ptosis comprises a group of diseases in which there is drooping of the upper eyelid due to developmental dystrophy of the Levator Palpebrae superioris[1], congenital 3rd nerve palsy, synkinetic ptosis, ptosis with elevation abnormality, and Blepharophimosis syndrome. Congenital ptosis often results from a failure in the embryonic development of the LPS muscle. Although isolated congenital ptosis can have an autosomal, dominant, or recessive inheritance, it may be a part of a larger spectrum of birth defects combined with other ocular or systemic conditions. It usually presents with a variable loosening of the upper eyelids due to a loss of muscular or nerve function that can be unilateral or bilateral.[2] Congenital ptosis is generally considered a non-progressive condition; however, it is associated with the development of visual disturbances such as myopia, astigmatism, anisometropia, amblyopia, ocular torticollis, and strabismus. These sequels of ptosis provide a compelling reason to pursue early surgical correction.[3] This is particularly true in cases of congenital ptosis since clearance of the visual axis is essential for the prevention of visual loss related to amblyopia.

## MATERIAL AND METHOD

This is a retrospective study conducted in the Department of Ophthalmology, GMC Srinagar. The study was conducted on patients who underwent surgical correction for ptosis. Informed consent from the patients was taken before surgery for taking part in this study. After obtaining the ethical clearance from the institutional ethical committee, the study was conducted on congenital ptosis patients.
(Figure 1) who underwent a surgical correction in a period of 2 years (Jan. 2018- Jan.2020).

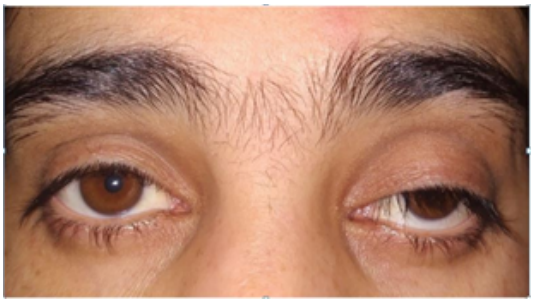


**Figure 1:** Patient of congenital ptosis

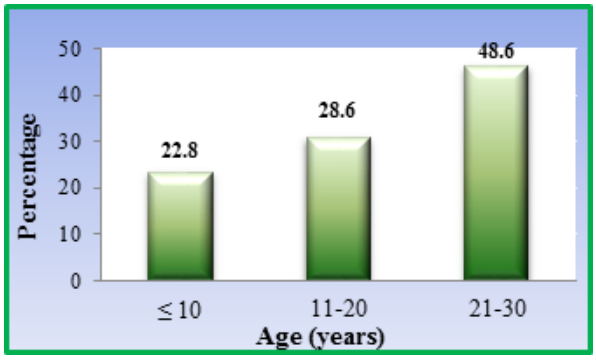
A proper history was taken and a detailed clinical examination was done for all the cases to determine the age of onset, laterality, presence or absence of lid crease, any compensatory head posture, and fundus examination, at the time of diagnosis of the disease. All the patients had undergone cycloplegic refraction and fundus examination before undergoing any surgical procedure. Later, data regarding age at presentation, sex distribution, and laterality were obtained from the hospital records. All the patients having congenital ptosis were included in the study while patients of acquired ptosis were excluded. The recorded data was compiled and entered in a spreadsheet (Microsoft Excel) and then exported to the data editor of SPSS Version 20.0 (SPSS Inc., Chicago, Illinois, USA). Continuous variables were expressed as Mean±SD and categorical variables were summarized as frequencies and percentages. Graphically the data was presented by bar diagrams.

## RESULTS

The results of the study are as follows:

**Table 1: Distribution Of Age At Presentation**

| Age (years) | Frequency | Percentage |
|---|---|---|
| ≤ 10 | 8 | 22.8 |
| 11-20 | 10 | 28.6 |
| 21-30 | 17 | 48.6 |
| Total | 35 | 100 |
| Mean±SD (Range)=17.3±6.58 (6-25) | | |



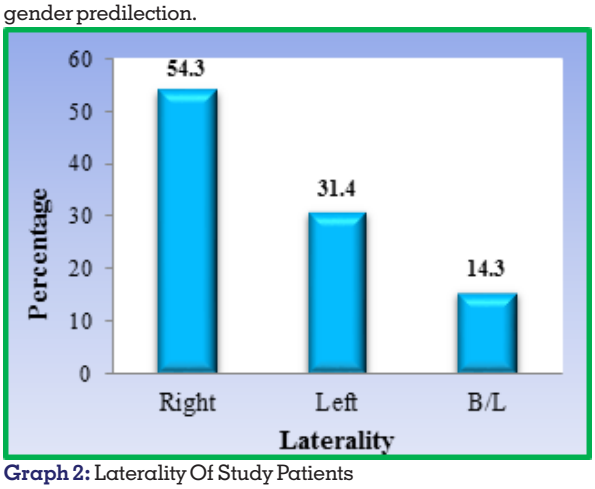

**Graph 1:** Distribution Of Age At Presentation

From TABLE 1 and GRAPH 1, 48.6% of cases presented after the age of 20 years. Children with congenital ptosis presenting at less than 10 years of age constituted 22.8% while 28.6% of patients presented between 11-20 years of age.

**Table 2: Gender Distribution Of Study Patients**

| Gender | Frequency | Percentage |
|---|---|---|
| Male | 17 | 48.6 |
| Female | 18 | 51.4 |
| Total | 35 | 100 |

From TABLE 2, the result showed that 51.4% (18) patients were females while 48.6% (17) patients were males, showing equal gender predilection.




**Graph 2:** Laterality Of Study Patients

From GRAPH 2, the study showed that 54.3% (19) of congenital ptosis patients had right eye involvement while 31.4% (11) of patients had left eye involvement. Only 14.3 % (05) of patients had bilateral ptosis.

## DISCUSSION

The prevalence of ptosis is similar for both genders and across different races. The risk factors for ptosis are Diabetes, Myasthenia Gravis and Brain tumour, all of which can affect neural or muscle responses. However, congenital ptosis is present since birth. It may be isolated or associated with other systemic conditions.

The mean age of the patients was 17.3±6.58 years with an age range of 06 to 25 years. The majority of the patients (48.6%) were clustered between 21 to 30 years. 28.6% of cases were in the age group between 11-20 years. Only 22.8% of congenital ptosis patients presented at the age below 10 years. The late age of presentation in our study could be because the child can carry out his activities as a result of the compensatory posture that the ptosis results in, like chin and brow elevation. The poor socio-economic conditions and lack of awareness about amblyopia may also have a role in the late presentation. In a study conducted by **Attarzadeh A et al**[4], the mean age of the patients was 15.3 years (range 3-28 years), which is comparable to our study. Another study conducted by **Prabha Padma et al**[5] revealed similar results where most of the congenital ptosis patients presented in the age group of above 16 years.

Among the 35 study patients, 17 (48.6%) were males and 18 (51.4%) were females which indicated equal predilection for both genders. In a study conducted by **Al-Mujaini A et. al**[6], the study patients included 05 females and 02 males, in a total sample of 07 patients which was comparable to our study.

In another study conducted by **AbrashamiA et al**[7], 136 patients were included among which 60 (44.1%) were males and 76 (55.9%) were females. A study conducted by **Qamar RMR et al**[8] observed male to female ratio to be 3:1. Two bilateral cases were females and 04 were males. Similarly, in a study conducted by **Cruz AAV et al**[9]multicenter retrospective review of 35 children included 14 (40%) girls and 21 (60%) boys and a study conducted by **Nguyen CT et al**[10] included 37 patients with a male to female ratio of 1.2:1

Our study revealed that out of 37 patients, 19(54.3%) patients had congenital blepharoptosis on the right side, 11 (31.4%) patients had left-sided ptosis, and 05 (14.3%)) were bilateral cases. In a study conducted by **Griepentrog GJ et al**[11] 90% of known cases were of congenital ptosis with only 3% bilateral cases and 68% of left-sided ptosis. In a similar study conducted by **El-Essawy R et al**[12], 336 children with ptosis were studied where 69% were congenital. Left side ptosis was again clearly predominant (74%), which is not comparable to our study. It may be because of the small sample size and shorter duration of our study, hence cannot be reflected upon the whole population.

## CONCLUSION

Within the limitations of this study it was concluded that despite being congenital, the age of presentation of congenital ptosis patients is relatively late due to unawareness and compensatory head posture. Also, there is equal gender predilection for congenital ptosis. Moreover, in congenital ptosis patients, the involvement of the right eye is more common.

The study has few limitations including a small sample size and a shorter duration of the study. Therefore, it is recommended that a study with larger sample size and longer duration should be conducted in the future.

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