



A STUDY ON CAUSES OF CATARACT IN PRESENILE AGE GROUP: A HOSPITAL BASED STUDY

Ophthalmology

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ABSTRACT

Purpose: The aim of this study was to a study on causes of cataract in presenile age group patients who presented to us in the Department of Ophthalmology at M.L.B. Medical College, Jhansi. **Materials And Method:** Retrospective study of 30 patients of cataract in presenile age group presented to us in the Department of Ophthalmology at M.L.B. Medical College, Jhansi. **Results** In this study 62% of the patients were males and rest females. 60% of the patients had posterior subcapsular cataract at the time of presentation with 23% had immature cataract and rest had mature cataract. In this study majority of the patients who presented to us with cataract in presenile age group had history of trauma with 34% of the patients. Patients with chronic systemic steroid intake as well as nasal spray in allergic conditions too presented to us as cataract in presenile age group. **Conclusion** Cataract comprises for 62.6% of blindness in India, the risk factors for cataract in presenile age group have been evaluated in very few studies. Majority of patients had posterior subcapsular cataract in morphology. Majority of them who presented to us were males and history of trauma.

KEYWORDS

Traumatic Cataract, Diabetes, Steroid Use, Congenital Cataract, Hypercalcemia.

INTRODUCTION:

A cataract is a clouding or opacification of the normally clear lens of the eye or its capsule that obscures the passage of light through the lens to the retina of the eye. This blinding disease can affect infants, adults, and older people, but it predominates the latter group. It can be bilateral and vary in severity. Cataract is often described as being similar to looking through a waterfall or waxed paper.[1]

A cataract can form after blunt or penetrating injuries to the eye and entry of a difficult-to-remove foreign object, leads to physical damage and discontinuation of the eye lens capsule. When the outer lens capsule breaks, the inner lens swells with water and turns white due to denaturation of lens proteins. Concussion of the lens without rupture of the capsule may result in a cataract that is initially sub-capsular and commonly has a star-shaped appearance.[2] These injuries typically occur in young men, and the lenses are very soft and easy to suck out. People working in hazardous conditions such as welders and those in glass furnaces are more susceptible to this kind of injury-induced cataract. Lens opacities associated with cutaneous diseases are termed syndromatotic cataracts, occur at young age and are bilateral.[3] Atopic cataract is most common condition associated with atopic dermatitis (AD), especially in children.[4] The mechanism is not known; however, habitual tapping and rubbing of the face in pruritic conditions may play a role.[5] Patients with AD have been found to have higher levels of protein flare in the aqueous humour.[6] Steroid use is the fourth leading risk factor for secondary cataract and accounts for 4.7% of all cataract extractions.[7] In addition to systemic steroids, cataracts have also been associated with ocular topical steroids, inhaled steroids, and topical steroid creams.[8,9] Steroids, such as prednisone, block normal metabolism of connective tissue, of which the lens is composed. Even low potency steroid creams applied to the eyelids may result in increased intra-ocular pressure and cataract.[10] The mechanism of corticosteroid-induced cataract is not known but may be due to osmotic imbalance, oxidative damage, or disrupted lens growth factors.[11]

MATERIALS AND METHODS

This study was a retrospective observational study that involved 30 patients of cataract in presenile age group complaining of chronic blurring of vision not improving with pinhole and not associated with pain. Patients were recruited from the OPD done at the Maharani Laxmi Bai Medical College, Department of Ophthalmology between March 2023 to June 2023. It was performed under the Helsinki Declaration of 1975, as revised in 2000. The necessary from the

Ethical and Research Committee was obtained for the study.

Inclusion Criteria

All patients who presented to us with complaining of chronic blurring of vision not improving with pinhole, which later examined using Slit Lamp Bio microscopy and Indirect Ophthalmoscopy and then diagnosed to be of cataract. Selected patients were of the age below 45 years.

Exclusion Criteria

1. Patient who had congenital cataract.
2. Patient with any other retinal disorders.
3. Patients older than 45 years.
4. Patients who refused consent.
5. Patients with corneal disorders.

RESULTS

In this retrospective study it was found that 34% of patients were of traumatic cataract which typically resulted in rosette shaped cataract, followed by patients of Diabetes mellitus 27%. Cataract in patients using nasal steroids spray for allergic conditions like atopic dermatitis as well as patients with chronic systemic steroids intake had been found in 13% each of total patients in study. 3% of the patients were found to be of primary hypoparathyroidism. Similar 3% of the patients were found to be exposed with radiation. In this study we found that 7% of the patients who presented to us as cataract in presenile age group were exposed to electric shock. In our study we found that 62% of the patients were males and rest 38% females. In this study maximum patients who presented to us had posterior subcapsular cataract in morphology constituting 60% of patients. 23% of patients had immature cataract and rest 17% had mature cataract.

DISCUSSION

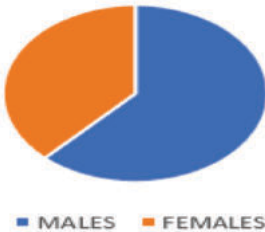
Although cataract comprises for 62.6% of blindness in India, the risk factors for cataract in presenile age group have been evaluated in very few studies. Many risk factors that could have triggered the early development of cataracts were reported in our research [12]. Different risk factors were implicated with some patients. In a study conducted in western India to investigate the risk factors for the early onset of cataracts in India by Vashist et al., atopy was found to be the most common risk factor associated with cataract formation, being associated with 25.6% of cases [13]. A higher correlation of cataracts with DM was found in our research. The most common morphological form of cataract is the posterior subcapsular cataract [14]. In all risk

factor categories, it was also the most prevalent form of cataract. In a study conducted in Western India and another study conducted in the Northern part of India, similar results were published [15]. The fact that PSC produces more and faster vision deterioration than other forms of cataract may be another potential explanation for the elevated prevalence of PSC, because patients who are symptomatic earlier will report cataract surgery earlier. Therefore, the share of PSC in the population could potentially be overestimated [16]. The drawback of this work is that this was small sample size, like most of the previous studies. More insights about the aetiology and modifiable risk factors would have been generated by a large sample size.

Table 1: showing number of patients with various types of cataract

TYPES	n (%)
Diabetic patient	08(27%)
Traumatic	10(34%)
Chronic systemic steroid use	04(13%)
Hypoparathyroidism	01(3%)
Radiation exposure	01(3%)
Electric shock	02(7%)
Allergic conditions like Atopic Dermatitis	04(13%)

GENDER DISTRIBUTION



Pie Chart 1: showing gender distribution

Table 2: showing morphology of cataract in the study

Morphology	n (%)
Mature cataract	05(17%)
Immature cataract	07(23%)
Posterior subcapsular cataract	18(60%)

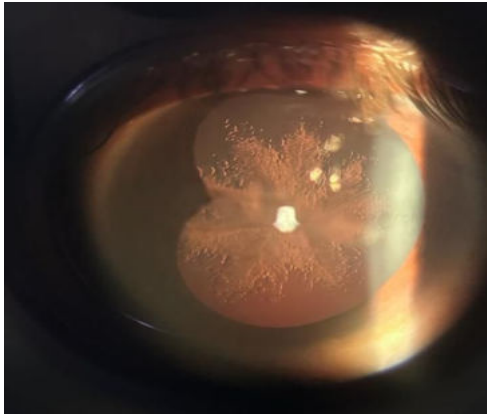


Image1: showing slit lamp photograph of traumatic typically rosette shaped cataract

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