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RESEARCH ARTICLE

ASSESSMENT OF VISUAL ACUITY AND COMPLICATIONS POST CATARACT SURGERY IN PATIENTS WITH UVEITIS IN TERTIARY CARE HOSPITAL

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Abstract

Aim and Objectives Aim: To study the visual acuity and operative complications after cataract surgery in patients with uveitis in tertiary care hospital

Objectives: 1.To study factors affecting visual acuity. 2.To study surgical complications post cataract surgery in uveitis patients.

Materials and Methods:A total of 18 patients were taken, data was collected from all the selected patients using a structured proforma meeting the objectives of the study. •

Inclusion Criteria:1.All complicated cataract patients attending ophthalmology OPD 2.A quite eye (without inflammation) for atleast 3 months •

Exclusion Criteria: 1.Cataract due to causes other than uveitis 2.Patients with posterior segment pathology Patients were scheduled for follow up on post op day 1, day 3 , day 7 , day 15, day 30, day 60, day 90.

Results: The prevalance was more common in males compared to females. Out of 18 patients, 14 (77%) underwent SICS with PCIOL implantation and 4 (22%) underwent phacoemulsification with PCIOL. Intra-operative complications were noted as small non-dilating pupil, peripheral anterior synechiae, pupillary membrane, incomplete capsulorhexis, iris prolapse. In 7 (38%) patients sphincterectomy was done and in 4 (22%) patients stretch pupilloplasty was done. Immediate post-op complications that were noted were anterior chamber reaction and pigment dispersion. Late post-op complications that were noted were posterior capsular opacification Dense posterior synechiae were encountered in 12 (66%) patients and excessive conjunctival bleeding in 6(33%) patients. There was improvement in visual outcomes as follows 8 patients had 6/6 vision, 6 patients had 6/18 vision where as remaining 4 patients had 6/36 vision due to early development of posterior capsular opacification.

Conclusion: Cataract development is a very common occurrence in any form of anterior and intermediate uveitis because of chronic intraocular inflammation, long term use of corticosteroids. Reported incidence of cataract in uveitic patients is about 25% in juvenile rheumatoid arthritis and 75% in chronic anterior uveitis. It is possible

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to achieve successful visual outcomes following cataract surgery in uveitis by proper management of pre-operative inflammation and close post-operative observation. Management of uveitic cataract requires careful case selection, proper timing of surgery, and close monitoring with appropriate handling of complications that may occur.

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Introduction:-

The development of corticosteroids in the early 1960s marked a significant advancement in the management of ocular inflammation, particularly in conditions such as uveitis. Prior to their availability, controlling inflammation in the eye was challenging and sometimes impossible. Chronic inflammation in conditions like uveitis often led to complications such as the development of cataracts[1]

Cataract surgeries in patients with uveitis pose unique challenges compared to surgeries in individuals with senile cataracts. Several factors need to be considered:

Underlying Cause of Uveitis:
The cause of uveitis can vary, and understanding the underlying etiology is crucial in determining the appropriate management approach. Inflammatory processes associated with conditions like autoimmune diseases or infections may require tailored treatment strategies.

Visual Rehabilitation:
Uveitic cataract may affect visual function differently than senile cataracts. Patients may have additional visual impairments due to underlying inflammation or other ocular comorbidities. Visual rehabilitation strategies need to be customized based on individual needs and limitations.

Surgical Technique:
The presence of inflammation and structural changes in the eye due to uveitis can complicate the surgical procedure. Surgeons may need to modify their techniques to account for factors such assynechiae, compromised tissue integrity and others. Careful intraoperative management is essential to minimize the risk of complications.

Postoperative Care:
Uveitic patients undergoing cataract surgery require close monitoring in the postoperative period. There may be an increased risk of complications such as recurrent inflammation, cystoid macular edema, or glaucoma. Managing these complications promptly is crucial for achieving optimal visual outcomes.

Multidisciplinary Approach:
Collaborating with other specialists, such as rheumatologists or infectious disease specialists, may be necessary for managing underlying systemic conditions contributing to uveitis. A multidisciplinary approach ensures comprehensive care and improves overall treatment outcomes.

While postoperative prognosis is significantly improved in these patients with the development of more potent anti-inflammatory drugs and advances in microsurgical techniques, uveitis patients remain at increased risk for postoperative complications, including persistent postoperative inflammation and cystoid macular edema[2]

Aim and Objectives:-

Aim:-

To study the visual acuity and operative complications after cataract surgery in patients with uveitis in tertiary care hospital.

Objectives:-

To study factors affecting visual outcome.
To study intra-operative, post-operative complications.

Methodology:-

A total of 18 patients were taken, data was collected from all the selected patients using a structured proforma meeting the objectives of the study.

Inclusion Criteria:

1. Complicated cataract patients secondary to uveitis attending ophthalmology OPD
2. A quiet eye (without inflammation)

Exclusion Criteria:

1. Cataract due to causes other than uveitis
2. Patients with posterior segment pathology

Ocular Examination:

A complete ophthalmic examination was done for all the patients, which included detailed- visual acuity, slit lamp Anterior Segment examination, Grading of cataract, Presence and extent of posterior synechiae, fundus examination by direct and indirect ophthalmoscopy if posssible, IOP measurements.

Investigations:

Routine blood investigations.
Chest x-ray
Rheumatoid factors, ESR, CRP, C-ANCA
Fitness by physician
Anaesthesiologist evaluation

• **Pre-Op Medications:**

All patients were started on topical antibiotics and steroid 1 week before the surgery.
Strong mydriatics were used for maximum pupillary dilatation.

• **Surgery**

Peribulbar block was given to adults and general anaesthesia for children.

Out of 18 patients, 14 underwent SICS with PCIOL implantation and 4 underwent phacoemulsification with PCIOL implantation.

First a conjunctival flap was made superiorly, tenon's capsule was separated completely, bipolar cautery was done to the bleeding vessels.

Anterior chamber was entered either through the limbal wound or the scleral tunnel. Viscoelastics were used to maintain the anterior chamber.

Capsulotomy was done by continuous curvilinear capsulorhexis, Nucleus delivery was done, and a thorough cortex wash was done. In the bag PCIOL was implanted.

• **Postoperative Treatment**

All patients were put on topical antibiotic steroids, 6 times a day. In addition, patients who had anterior chamber reaction received injection of periocular steroids.
Cycloplegics preferably Homatropine
NSAIDs eye drops
Systemic steroids in tapering dose if inflammation was severe

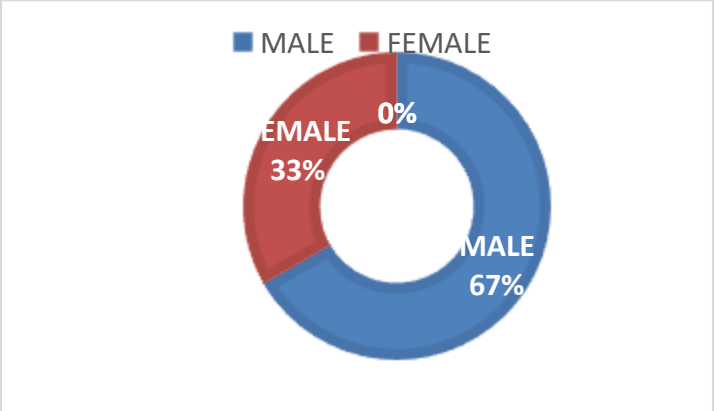
• **Follow Up**

Slit lamp examination was done for all patients, for first 3 post op days. Patients were asked to follow up every week for the first 4 weeks.

During the follow up, thorough examination was done to look for improvement in vision, any anterior chamber reaction, position of the IOL, fundus picture

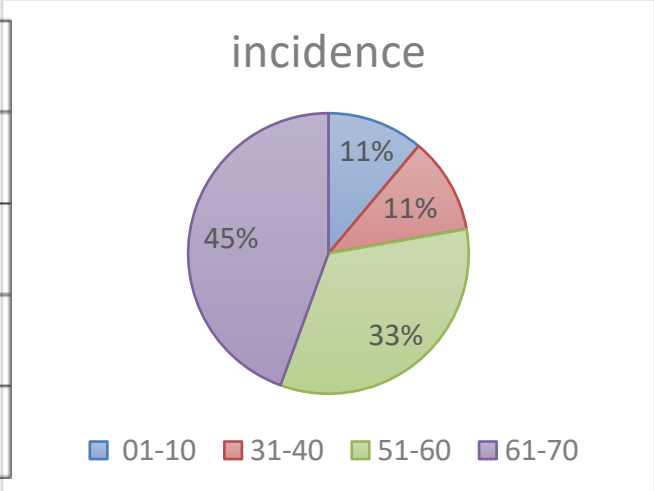
Gender Predilection

GENDER	NO. OF PATIENTS	PERCENTAGE
MALE	12	67%
FEMALE	6	33%



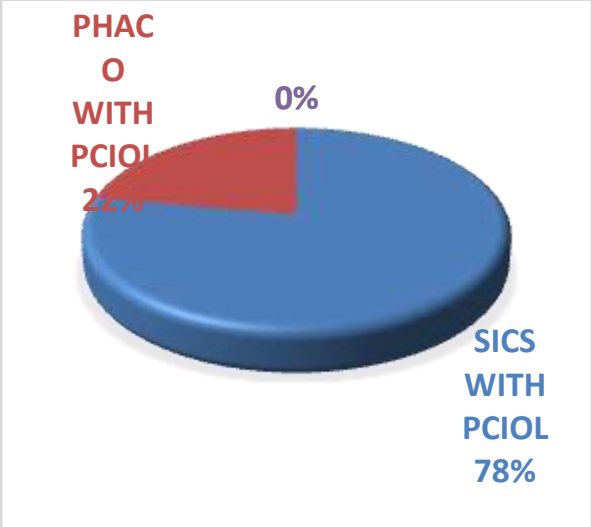
Age group

AGE GROUP	NO. OF PATIENTS	PERCENTAGE
1-10	2	11%
31-40	2	11%
51-60	6	33%
61-70	8	45%



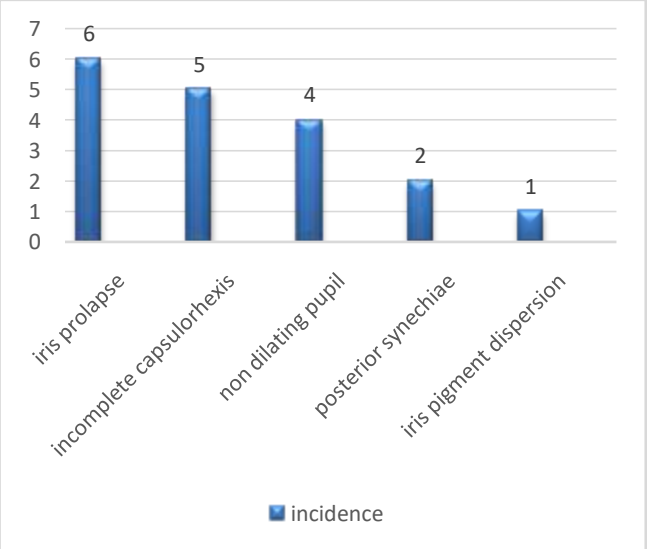
Type Of Cataract Surgery

SURGERY	NO. OF PATIENTS	PERCENTAGE
SICS WITH PCIOL IMPLANTATION	14	78%
PHACO WITH PCIOL IMPLANTATION	4	22%



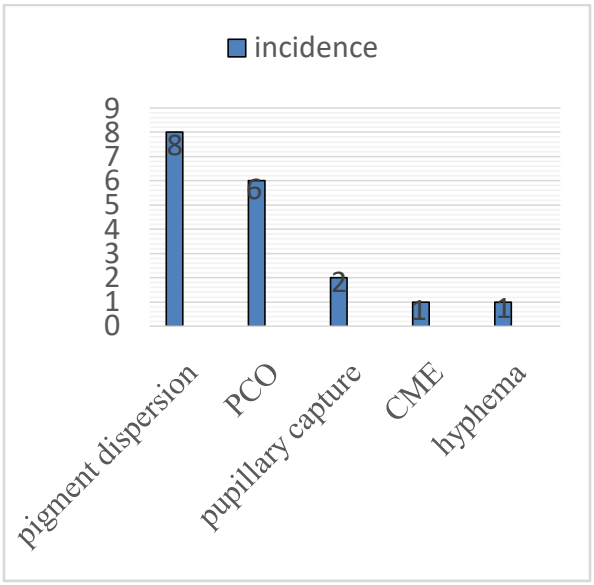
Intraoperative complications

COMPLICATIONS	NO. OF PATIENTS	PERCENTAGE
IRIS PROLAPSE	6	33%
INCOMPLETE CAPSULORHEXIS	5	28%
NON DILATING PUPIL	4	22%
POSTERIOR SYNECHIAE	2	11%
IRIS PIGMENT DISPERSION	1	6%



Post-operative complications

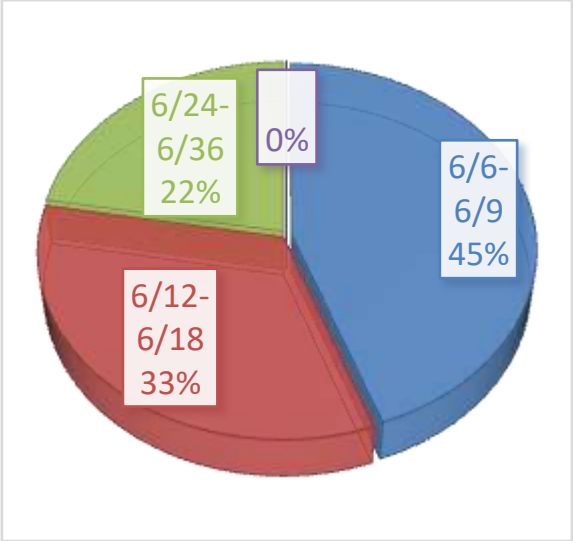
COMPLICATION	NO. OF PATIENTS	PERCENTAGE
PIGMENT DISPERSION	8	44%
PCO	6	33%
PUPILLARY CAPTURE	2	11%
CME	1	6%
HYPHEMA	1	6%



This result was comparable to the study done by Dana MR et al at the Massachusette eye and ear infirmary, Boston. In their study 54 % of patients had visually significant posterior capsular opacification. In another study done by Rahman and N P Jones –Royal eye hospital, Manchester UK, 96% of patients had visually significant posterior capsular opacification.

Post-operative visual acuity

VISION	NO. OF PATIENTS	PERCENTAGE
6/6-6/9	8	45%
6/12-6/18	6	33%
6/24-6/36	4	22%



Results and Discussion:-

The occurrence of cataract in uveitis was more common in males compared to females.

Out of 18 patients, 14 (77%) underwent SICS with PCIOL implantation and 4 (22%) underwent phacoemulsification with PCIOL implantation

Intra-operative complications were noted as small non-dilating pupil, peripheral posterior synechiae, pupillary membrane, incomplete capsulorhexis, iris prolapse.

Immediate post-op complications that were noted were anterior chamber reaction and pigment dispersion, hyphema, iris prolapse .

Late post-op complications that were noted were posterior capsular opacification

Dense posterior synechiae were encountered in 12 (66%) patients and excessive conjunctival bleeding in 6(33%) patients.

There was improvement in visual outcomes as follows 8 patients had 6/6 vision, 6 patients had 6/18 vision where as remaining 4 patients had 6/36 vision due to early development of posterior capsular opacification.

Conclusion:-

Overall the study emphasizes on the importance of careful patient selection, adequate preoperative control of uveitis and effective management of complications to achieve favorable visual outcome.

Managing uveitic cataract requires a comprehensive approach, including careful case selection, appropriate timing of surgery, meticulous surgical technique, and vigilant postoperative monitoring[3i]

With proper management, uveitic cataract can achieve good visual outcomes.the passage emphasizes that success in managing uveitic cataract is achievable with a combination of clinical expertise, a sound understanding of the disease and a commitment to addressing inflammation and complications throughout the treatment process.

It highlights the importance of multidisciplinary approach to ensure the best possible results for these patients.

Preventive Measures

Preoperative Use:

Starting topical NSAIDs, at least three days before eye surgery is recommended. This preoperative use helps to reduce inflammation and prepare the eye for surgery.

Postoperative Use:

These topical NSAIDs are continued for an extended period after surgery, typically for at least six to eight weeks. This extended use is crucial to manage postoperative inflammation and to prevent complications like cystoid macular edema (CME).

The use of topical and systemic corticosteroids is tailored according to the severity and underlying cause of uveitis.

The goal is to control inflammation, preserve vision, and manage any underlying systemic conditions effectively while minimizing the risk of complications

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