

## Clinical Study of Role of Cyclocryotherapy in Management of Glaucoma

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**Abstract:**

**Aim:** This is a retrospective study done to evaluate the efficacy of cyclocryotherapy in the management of cases with very high intraocular pressure.

**Key words:** Absolute glaucoma, neovascular glaucoma, ciliary body, intraocular pressure, cyclocryotherapy.

**Results:** It was observed in our study that intraocular tension, pain, redness of eyes and watering were reduced in 90% of cases

**Conclusion:** Cyclocryotherapy is very effective in cases of glaucoma that do not respond to other medical and surgical procedures.

**Materials and Methods:** The study was conducted in the Department of Ophthalmology during a period of 3 years.

All the 30 patients were hospitalized.

**Inclusion Criteria:** Patients with very high I.O.P were included.

**Exclusion Criteria:** Cases with very high I.O.P but with good vision in which medical and surgical methods were used.

Informed consent was taken from the patients. Detailed slit lamp examination of both eyes was done and I.O.P measured. visual assessment was done and effected eye was taken as single case.

**Cyclocryotherapy:** Cooper and Lind surgical instrument was used. case was done under local anaesthesia.

Cryopen is a hollow scaled at one end. open end is attached to plastic tube the refrigerant console.

**Principle:** Placed tip of the cryoprobe 4mm from limbus on the conjunctiva with temperature -70 degree centigrade to -80 degree centigrade leave for 60sec till iceball forms. After it thaws apply at another site. -10 centigrade reaches the ciliary body, facility of aqueous outflow reduced, but later on the decrease aqueous production compensates for decreased out flow causing a net lowering of I.O.P.

**Discussion:** In the present study pre operative detailed slitlamp examination, I.O.P measured and visual acuity was assed.

Cyclocryotherapy was done at 8 o clock under anaesthesia postoperatively also, the intraocular tension, slitlamp examinations and vision was noted to evaluate efficacy of the procedure.

Date of Submission: 06-11-2020

Date of Acceptance: 19-11-2020

### I. Results

**I. Distribution of cases depending on pre operative tension.**

Sc no:	I.O.P	% OF CASES
1.	< 30mmHg	-
2.	30-40mmHg	30%
3.	40-50mmHg	40%
4.	>50mmHg	30%

**II. Distribution of cases depending on Age of patient.**

Sc no	AGE GROUP	% OF CASES
1.	20-30 YEARS	15%
2.	31-40 YEARS	50%
3.	41-50 YEARS	5%
4.	51 AND ABOVE	30%

**III. Distribution of cases depending on sex of patients.**

Sc no	TYPE OF GLAUCOMA	MALE	FEMALE
1.	PRIMARY GLAUCOMA		
	a.OPEN ANGLE	25%	10%
	b.NARROW ANGLE	5%	35%

2.	SECONDARY GLAUCOMA	20%	5%
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**IV. Distribution of cases depending on type of glaucoma.**

PRIMARY GLAUCOMA		SECONDARY GLAUCOMA
OPEN ANGLE	CLOSED ANGLE	
40%	35%	25%

**V. Post operative visual acuity.**

Sc no	VISION	% OF CASES
1.	Static	90%
2.	Improvement	10%
3.	Decrement	-

In our study we noted a transient rise of I.O.P on first and second post operative day followed by gradual decrease of I.O.P, pain redness of eyes was decreased in 90% of cases. The incidence was equal in both men and women. visual acuity following cyclocryotherapy was static in 90% of cases. Most common type was absolute glaucoma 75%. It is a very effective procedure in cases of absolute glaucoma.

After performing cyclocryotherapy on 68 eyes in 64 patients BENSON AND NELSON reported 29.4% success rate. HENNEKER and BELGRADE reported 58.3% success for 56 cases. Capraoli et al reported that 6% of the patients developed ptosis. neovascular glaucoma accounted for 5% cases in study by BRINDLY AND SHIELD.

**II. Conclusion:**

In the study there has been reduction of I.O.P decreased pain and redness in 90% of cases this procedure is very effective in cases of absolute glaucoma. so, cyclocryotherapy is treatment of choice in management of absolute glaucoma and neovascular glaucoma.

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Dr.G.SERINA SAMUEL,M.S. “Clinical Study of Role of Cyclocryotherapy in Management of Glaucoma.” *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 19(11), 2020, pp. 63-64.