

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

<sup>1</sup>Dr.G.Serina Samuel,M.S, <sup>2</sup>Dr.Alla Venkata Pitchi Reddy,M.S,

<sup>3</sup>Dr. V Sivaram Prasad,

<sup>1</sup>Asst.professor of Ophthalmology Guntur Medical college / GGH Guntur

<sup>2</sup>Asst.professor of Ophthalmology Guntur Medical college / GGH Guntur

<sup>3</sup>Junior resident in ophthalmology,Guntur medical college/GGH ,GUNTUR.

Corresponding Author: Dr.G.Serina Samuel,M.S

### 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 3years.

All the 30 patients were hospitalized.

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

**Exclusion Criteria:** In Cases with very high I.O.P but with good vision other medical and surgical methods were tried

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### I. Introduction

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<sup>1</sup>:** Cooper and Linde's surgical instrument was used.cases were done under local anaesthesia.Cryopen is a hollow insulated probe, sealed at one end.open end is attached to plastic tube containing the refrigerant console.Principle: Placethe 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 as shown in figure. 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.



### II. Discussion

In the present study pre operative detailed slitlamp examination, I.O.P measured and visual acuity was assessed.Cyclocryotherapy was done at 8 clock hour positions under anaesthesia.postoperatively also,the intraocular tension,slitlamp examinations and vision was noted to evaluate efficacy of the procedure.

### III. Results

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

Sc no:	I.O.P	% OF CASES
1.	< 30mmHg	nil
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	10%
2.	31-40 YEARS	50%
3.	41-50 YEARS	10%
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	20%	10%
2.	B.NARROW ANGLE	10%	30%
	SECONDARY GLAUCOMA	20%	10%

#### IV. Distribution of cases depending on type of glaucoma.

PRIMARY GLAUCOMA	SECONDARY GLAUCOMA
OPEN ANGLE      CLOSED ANGLE	
40%                      30%	30%

#### V. Post operative visual acuity.

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

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 70%. It is a very effective procedure in cases of absolute glaucoma. After performing cyclocryotherapy on 68 eyes in 64 patients BENSON AND NELSON<sup>2</sup> reported 29.4% success rate. HENNEKER and BELGRADO<sup>3</sup> reported 58.3% success for 56 cases. Caprioli et al<sup>4</sup> reported that 6% of the patients developed phthisis. Neovascular glaucoma accounted for 50% cases in study by Brindly And Shield<sup>5</sup>

### IV. Conclusion

In our 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.

### References

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