

Establishing Glaucoma Clinic: Essential or Nonessential For General Hospital

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Abstract

Original Research Article

Introduction: Since India is a developing country, our health infrastructure is not well standardised at every hospital. Some hospitals are providing all documentation and special care to glaucoma patients by establishing Glaucoma Clinics (GC), but unfortunately their numbers are very less in our country. So we want to study the beneficial impact of GC in glaucoma patient treatment. **Material and methods:** All those patients' records who are diagnosed as glaucoma and being treated for the same in glaucoma clinic or in routine OPD for a minimum period of 2 years are analyzed in the study. **Results:** 1298 patients from glaucoma clinic and 710 patients from routine OPD fulfilled the inclusion criteria of the study. Out of these 710 OPD patients 143 patients (20.1%) did not have glaucoma based on evaluation in our glaucoma clinic. 1268 (97.7%) glaucoma clinic patient out of 1298 have achieved the target IOP, whereas 489 (86.2%) OPD patients out of total 567 which is statically significant P valve <0.0001. Glaucoma progression was 1% in Glaucoma Clinic group in compression to 13% in OPD group which is statically insignificant p valve 0.028. **Discussion:** A good adherence and persistency to the treatment is necessary but cost, misbelieve, non communication between doctor and patients are major obstruction. By establishing G C better information, communication and education can be given that's the reason of higher follow up compliance and adherence than OPD patients and previous studies. **Conclusion:** Glaucoma is a sight threatening disease and the number of such patient is increasing day by day. So to negotiate the upcoming health threat we should surely focus on establishing the specialized glaucoma clinics.

Keywords: Glaucoma, Optic Nerve, Glaucoma clinic.

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INTRODUCTION

Glaucoma is a sight threatening disease. It usually needs long term follow-up and management. For good glaucoma management documentation of the base line and follow-up is mandatory. Goal of glaucoma Therapy to preserve the vision related quality of life of the patient so that the patient does not develop any functional disability in his/her life span. The specific goals of therapy are: To achieve target IOP and minimise fluctuations with minimum medicine, To educate and involve the patient and his family in the management of the disease process, To monitor the progression in reference to structure and function of the optic nerve damage and dynamically adjust the target IOP, To select the medicines which can provide the desired effect with least side effects and minimum effect on quality of life, To achieve treatment at an affordable and sustainable cost and To treat systemic factors possibly affecting the optic nerve [1-3].

Since India is a developing country, our health infrastructure is not well standardised at every hospital. Some hospitals are providing all documentation and special care to glaucoma patients by establishing Glaucoma Clinics (GC), but unfortunately their numbers are very less in our country. So we want to study the beneficial impact of GC in glaucoma patient treatment. Compliance to Follow Ups was 97.8% in GC group in compression to 76.2% in OPD patients group which has p valve <0.001, statically significant. Adherence to treatment was 91.7% in GC group as compassion to 76.7% in OPD group which is statically significant p value <0.001. Information, Communication and Education for glaucoma was 100% in GC group and 47.9% in OPD group which is statically significant p value <0.001. Availability of base line & follow ups record 1298 (100%) and 240 (42.32%) in OPD group which is statically significant p value <0.001. Target IOP mentioned on the 779 (60%) in GC and zero in OPD group which is statically significant p value <0.001.

Diurnal variation mentioned on the records 1233 (95%) in GC group and zero in OPD group which is statically significant p value <0.001.^{1,3,4,5}

Study Design: A retrospective medical audit study.

Aims: To compare the quality of management of glaucoma patients in glaucoma clinic Vs general ophthalmic OPD.

MATERIAL AND METHODS

We conducted the study at PGIMER (Dr. R M L Hospital) New Delhi. It's a retrospective study. All those patients' records who were diagnosed as glaucoma and being treated for the same in glaucoma clinic or in routine OPD for a minimum period of 2 years are analyzed in the study. The file records were noted under Primary Outcome Variables as:

- 1) Target IOP achieved or not at the time of enrollment.
- 2) Any Disease progression- based on automated perimetry/Optic N. head records changes.

Besides these we also noted the following secondary Outcome variables as per European Glaucoma society guidelines [6]. Which are as follows:

1. Compliance to follow up
2. Adherence to treatment
3. Availability of baseline and follow up records
4. Information Education and Communication for glaucoma
5. Diurnal variation and target IOP

Those patients, who did not come even on single visit, in the least 3 years, were excluded from the study. All the outcome parameters were analyzed by using Chi square test.

RESULTS

1298 patients from glaucoma clinic and 710 patients from routine OPD fulfilled the inclusion criteria of the study. Out of these 710 OPD patients 143 patients (20.1%) did not have glaucoma based on evaluation in our glaucoma clinic. So, only 567 OPD patients were enrolled in our study.

Table-1: Primary variables

Outcome measures	Glaucoma Clinic	OPD	P value
Achieved Target IOP	1268 (97.7%)	489 (86.2%)	<.0001
Glaucoma progression	13 (1.0%)	13 (2.3%)	.028
Total	1298	567	

1268 (97.7%) glaucoma clinic patient out of 1298 have achieved the target IOP, whereas 489 (86.2%) OPD patients out of total 567 which is statically significant P valve <0.0001. Glaucoma progression was

1% in Glaucoma Clinic group in compression to 13% in OPD group which is statically insignificant p valve 0.028.

Table-2: Secondary variables

Outcome measures	Glaucoma Clinic	OPD	P value
Compliance to Follow Ups	1270 (97.8%)	541 (76.2%)	<.0001
Adherence to Treatment	1190 (91.7%)	545 (76.7%)	<.0001
ICE for glaucoma	1298 (100%)	340 (47.9%)	<.0001
Availability of base line & follow ups record	1298 (100%)	240 (42.32%)	<.0001
Target IOP mentioned on the records	779 (60%)	0 (0%)	0.00
Diurnal variation mentioned on the records	1233 (95%)	0 (0%)	0.00

Compliance to Follow Ups was 97.8% in GC group in compression to 76.2% in OPD patients group which has p valve <0.001, statically significant. Adherence to treatment was 91.7% in GC group as compassion to 76.7% in OPD group which is statically significant p value <0.001. Information, Communication and Education for glaucoma was 100% in GC group and 47.9% in OPD group which is statically significant p value <0.001. Availability of base line & follow ups record 1298 (100%) and 240 (42.32%) in OPD group which is statically significant p value <0.001. Target IOP mentioned on the 779 (60%) in GC and zero in OPD group which is statically significant p value <0.001. Diurnal variation mentioned on the records 1233 (95%)

in GC group and zero in OPD group which is statically significant p value <0.001.

DISCUSSION

A good adherence and persistency to the treatment is necessary but cost, misbelieve, non communication between doctor and patients are major obstruction. By establishing G C better information, communication and education can be given that's the reason of higher follow up compliance and adherence than OPD patients and previous studies [1-5].

Other benefits of G C

1. Most crucial face to face discussion among patients can't be given by any other means
2. These records can help us to modify our management strategy as most of these are based on western population studies
3. Useful source of material for research

CONCLUSION

Establishment of Glaucoma Clinics should be seriously considered by the health care providers and policy makers especially in government sector where generally no records of OPD patients are kept.

REFERENCE

1. Morley AM, Murdoch I. The future of glaucoma clinics. *Br J Ophthalmol*. 2006; 90(5):640-5.
2. Bowling B, Chen SD, Salmon JF. Outcomes of referrals by community optometrists to a hospital glaucoma service. *Br J Ophthalmol*. 2005; 89(9):1102-4.
3. Bettin P, Di Matteo F. Glaucoma: present challenges and future trends. *Ophthalmic Res*. 2013; 50(4):197-208.
4. Eni EN, Edet BE, Ibanga AA, Duke RE. Cross-Sectional Study on the Coping Strategies Among Glaucoma Patients Attending a Secondary Eye Clinic in Calabar, Nigeria. *Clin Ophthalmol*. 2020; 14:1307-1313.
5. Guo CY, Qi XH, Qi JM. Systematic review and Meta-analysis of treating open angle glaucoma with gonioscopy-assisted transluminal trabeculectomy. *Int J Ophthalmol*. 2020; 13(2):317-324.
6. European Glaucoma society guidelines 5th ed. <https://www.eugs.org/eng/guidelines.asp>