The Organisation of the Glaucoma Clinic

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Summary

The diagnosis and accurate assessment of progress of patients with glaucoma is more complex and time consuming than for most other ophthalmic disorders. Glaucoma patients in an overcrowded general clinic are therefore seldom given time for adequate visual field examination and all too often silent deterioration goes unnoticed until irreversible loss of central vision occurs. The introduction of a clinic specifically for glaucoma patients provides the opportunity for detailed assessment so that effective modern treatment can be applied and unnecessary blindness avoided. This paper describes the simple and practical plan for the organisation of a glaucoma clinic which has worked well for many years in the Tennent Institute of Ophthalmology.

The prevalence of glaucoma is so great that every ophthalmologist will have a considerable number of glaucoma patients. It is unrealistic to refer all cases to glaucoma specialists and every ophthalmologist should set up a glaucoma clinic even if run only once a month rather than once a week. There is also a need for a more specialised clinic to which problem cases may be referred for advice or for innovative forms of treatment. At whatever level of specialisation the clinic must provide the continuity of care so essential in the management of protracted disorders. The career of some glaucoma patients may easily outlast that of their physician and a patient's memory may record problems of treatment not easily detected by reading ill constructed case notes.

Facilities and Staff

Our plan has been to create a system whereby a patient's progress can be assessed by accurate and frequent visual field examinations. The recent introduction of computerised visual field analysis has to some extent hindered this ideal as it has proven more time consuming, without increasing the reliability of examination in our older or more erratic patients. The more detailed information which these machines can offer is seldom useful in making decisions in the practical management of glaucoma patients. In many cases however the computerised analysis can be carried out by staff less experienced than is necessary for kinetic field tests. This advantage is shared by the much simpler and less expensive Friedman analyser. We are also evaluating the use of self assessment of visual fields by the patient using oculokinetic perimetry.^{1,2}

Ophthalmic opticians specially trained in perimetry carry out the field examinations. These are regular members of the clinic staff and thus the problems of observer variation are reduced to a minimum. In some hospitals orthoptists have been trained to do perimetry and in either case better consistency is achieved than by using junior medical staff who change every few months. Our own practice is to use orthoptists for tonometry, especially for time consuming phasing and provocative tests. In other units it may be more feasible to employ nurses or other staff for these duties.

Up to forty patients may be dealt with in one afternoon by one consultant, one or two registrars and two opticians. One orthoptist is also available as required.

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Fig. 1. Flow diagram showing the course of a patient through the glaucoma clinic.

The Clinic Visit

Figure 1 is a flow diagram summarising the progress of the patient through the clinic. The organisation is aimed at presenting the patient with the completed tests to the ophthalmologist so that a definitive decision may be made about further management of the case at each visit. Most cases which appear to have stable fields with good control of intraocular pressure are seen every six months but problem cases will require more frequent visits and cases where the visual disturbance is minimal may be reviewed less frequently.

Before the start of the clinic the consultant examines the case records of patients due to attend that day. He checks that on the previous visit the details were fully recorded and that an accurate assessment was made. Changes in the visual field tests are often misinterpreted especially where they develop slowly over many years. Unneccesary over treatment seems as common as under treatment and any such flaws in interpretation are brought to the attention of the staff concerned. A note is pinned to the front of the case record to indicate the plan of tests to be carried out when the patient arrives. The consultant also indicates any queries he may have about previous management for the attention of the doctor who will see the patient. This preliminary review of case notes requires at least one hour but is essential for tight discipline in case management and documentation. The system of case records described below makes it a much less complex task than might be imagined.

The patient progresses through the clinic according to the programme indicated on the case note. The Snellen visual acuity is recorded by a nurse who then directs the patient for perimetry or tonometry, usually both. The exact type of field test required is specified for the guidance of the optician but this may be altered if the patient is found to have difficulty in co-operation, a not infrequent problem. Often these patients find the sensory isolation of bowl perimeters intimidating and the traditional Bjerrum screen is sometimes the only method which yields reliable results. Finally the patient arrives at the ophthalmologist for a formal consultation. The doctor's time can be spent exchanging information with the patients about the nature of their condition, their treatment and their progress. Appropriate refraction, slitlamp and ophthalmoscopic examination are carried out. The clinician is then in a position to make a definitive decision about the patients as outlined in Fig. 2 and arrange an appropriate return visit. Patients who fail to attend are sent a further date and if they again default a letter is sent to the general practitioner.

Documentation

Clinical notes of glaucoma patients must be carefully recorded and a special system of records helps



Fig. 2. Diagrammatic summary of the conclusions reached about the patient's stability and the appropriate follow up arrangements.



Fig. 3. Record sheet 1, summarising the diagnostic information.



Fig. 4. Record sheet 2, graph recording intraocular pressures, visual acuity and treatment.

display data in a fashion which assists interpretation. The sheets illustrated in Figs. 3 and 4 are used in the Tennent Institute and were initially compiled about 25 years ago by Professor WS Foulds while working at Addenbrookes Hospital, Cambridge. Figure 3 shows sheet 1 which allows a rapid summary of the type of glaucoma and the basis on which the diagnosis was made. Figure 4 shows sheet 2 which records in a compact and easily visible form the fluctuations in intraocular pressure and visual acuity over several years together with the effects of changes in treatment. At a glance the intrinsic stability or lack of stability of the patient's control over a long period may be assessed. These sheets are accompanied by field charts and progress notes. The latter do not record the data already entered in sheet 2 but record problems with treatment, results of detailed ocular examination and conclusions on the patient's progress.

Conclusion

This simple plan works well and variations of it have been adopted by many of our trainees and visitors in establishing their own glaucoma clinics. Simple although it is, it requires, like most systems, a continuous input of energy to prevent it collapsing. The presence, participation and supervision of the consultant in charge is essential if it is not to degenerate into "pressures fine, fields next time".

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