GRADUAL VISUAL LOSS, PARTIAL SIGHT, AND "BLINDNESS"

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Causes of gradual visual loss

Cataract.

Retinitis pigmentosa: pigmentation and attenuated vessels.

Radiograph showing calcified meningioma. Note a plain skull radiograph will not show most intracranial tumours.

● **Refractive error**—The pin hole test is a most useful test for identifying refractive error. If there is a refractive error the vision will improve. If the patient has strong glasses the pin hole should be used with the patient wearing the glasses. Once other causes of visual loss have been excluded, the patient can be sent to the optometrist for refraction.

● **Cataract**—This is probably the commonest cause of gradual visual loss and the diagnosis may be made on viewing the red reflex. The patient should be referred if the visual disturbance interferes appreciably with his lifestyle. If a patient with a cataract cannot project light or has an afferent pupillary defect, however, other diseases must be excluded.

● **Chronic open angle glaucoma**—Unfortunately the patient may not complain of visual disturbance until late in the course of the disease, hence the need for screening. Chronic open angle glaucoma should, however, be excluded in any patient complaining of gradual visual loss. Any family history of glaucoma should be elicited. The vision may still be 6/6 so the visual field should be checked with a red pin, and cupping of or asymmetry between the optic discs must be sought.

● **Senile macular degeneration**—This may occur gradually and is typified by loss of the central field. There are usually pigmentary changes at the macula. The disease occurs in both eyes, but it may be asymmetrical, and it is more common in short sighted patients. The gradual deterioration is not treatable, but if acute visual distortion supervenes during the course of the disease there may be a leaking vessel under the retina that may be treated with the laser.

● **Hereditary degeneration of the retina**—This is relatively rare but should be suspected if there is a family history of visual deterioration. Symptoms include intolerance to light and night blindness. Most types of degeneration are not treatable, but some are associated with metabolic disorders and the visual deterioration may be arrested by treatment of the metabolic abnormality. These patients need to be referred for diagnosis, treatment, discussion of prognosis, and genetic counselling and to social services and voluntary organisations.

● **Compressive lesions of the optic pathways**—These are relatively rare, but should always be considered. The history and examination may give clues if there are headaches, focal neurological signs, or endocrinological abnormalities such as acromegaly. There should not be an afferent pupillary defect in most patients with cataract, macular degeneration, or refractive error. Testing of visual fields may show the bitemporal defect of a pituitary tumour. The discs should be checked for optic atrophy and papilloedema.

● **Drugs**—Several drugs may cause visual loss. In particular, a history of excessive alcohol intake or smoking, methanol ingestion, or the taking of chloroquine or ethambutol should lead to a suspicion of drug induced visual deterioration. Systemic steroids may cause cataracts and steroid drops may induce glaucoma.

Management of gradual visual loss

- Strong light from behind
- Magnifying aids
- Large print books
- Closed circuit television

Useful addresses and telephone numbers:

Royal National Institute for the Blind, 224 Great Portland St, London W1N 6AA. Telephone 01 388 1266.

Branches at:

- Bryson House, 28 Bedford St, Belfast BT2 7FE
- 73 Tenison Road, Cambridge CB1 2DH
- 14 Neville Street, Canton Cardiff CF1 8UX
- Hartley Hill, North Street, Leeds LS2 8AU
- Alma Road, Reigate, Surrey RH2 0BA
- 9 Viewfield Place, Stirling FK8 1NL
- Church Square, Taunton TA1 1SA.

BBC Publications (*In Touch* book and bulletin), PO Box 234, London SE1 3TH.

Family Fund, Beverley House, Shipton Road, York YO3 6RB. Telephone 0904 29241. (A government fund administered by the Joseph Rowntree Memorial Trust to help families with severely handicapped children.)

Partially Sighted Society (general secretary), Queen's Road, Doncaster, South Yorkshire DN1 2NX. Telephone 0302 68998.

SENSE, National Association for Deaf/Blind and Rubella Handicapped, 311 Gray's Inn Road, London WC1. Telephone 01 278 1005.

SENSE in the Midlands, 4 Church Road, Edgbaston, Birmingham B15 3TD.

Large print books

Cedric Chivers Ltd, Book Sales Division, 93 Locksbrook Road, Bath BA1. Telephone 0225 335336.

ISIS, 55 St Thomas' Street, Oxford OX1 1JG. Telephone 0865 25033.

Ulverscroft Large Print Books, The Green, Bradgate Road, Anstey, Leicester LE7 7FU. Telephone 0533 364325.

"Talking" books:

Calibre, Aylesbury, Buckinghamshire HP20 1HU. Telephone 0296 432339.

RNIB Talking Book Service for the Blind, Mount Pleasant, Wembley, Middlesex HA0 1RR. Telephone 01 903 6666.

Talking Newspaper Association of the United Kingdom, 90 High Street, Heathfield, East Sussex TN21 8JD. Telephone 043512 6102.

Guide dog.

GUIDE DOGS FOR THE BLIND ASSOCIATION

The initial management of gradual visual loss depends on the cause. Refractive errors require no more than a pair of glasses. Cataracts can be removed and an artificial lens implanted. Glaucoma requires treatment with drugs to lower the intraocular pressure. There are, however, a large number of conditions that are not amenable to medical or surgical treatment. Despite this, there is still much that can be done for the patient.

● **Good lighting**—The patient should be advised to use adequate lighting. Using a stronger light bulb may make all the difference. Patients should be advised to read with a strong light placed behind them. A booklet called *Lighting and low vision* is available from the Partially Sighted Society (see below).

● **Low vision aids**—A simple magnifying glass may be a great help. Books with large print are available from most public libraries. There are also special magnifying aids that can be attached to glasses; these differ from a simple magnifying glass in that they allow magnification without the patient having to get extremely close to the print. Many eye hospitals have a low vision aids service that is usually run by an optician. It may be possible to obtain such aids on loan from the departments. Closed circuit television can be used to magnify text and may allow a visually handicapped person to do a normal job. Various home aids are also available, such as braille knobs for cookers. Details are available from the Royal National Institute for the Blind (RNIB).

● **Registration as partially sighted or blind**—This confers various benefits, which are shown below. Registration has to be authorised by a consultant ophthalmologist, and the requirements for registration are:

Partially sighted—The patient must have vision of 6/60 or worse in both eyes. The vision can be better than 6/60 if the visual fields are appreciably affected—for example, a patient with 6/6 vision but severely restricted fields caused by chronic open angle glaucoma.

Blind—The current statutory definition of blindness is "that a person should be so blind as to be unable to perform any work for which eyesight is essential." The guidelines for registration as blind are a visual acuity of 3/60 or worse in both eyes. Again, the visual acuity may be better than this if the visual fields are impaired.

These criteria are flexible and the final decision is left to the consultant ophthalmologist who will take other ocular problems into consideration. It is important that the patient does not feel that all hope is lost and eventually everything will go "dark." This is particularly the case for patients with senile macular degeneration where only central vision is lost. In this case the patient can be told that he will not go blind because he will still have peripheral vision. A patient with vision of counting fingers may still be virtually independent within the home despite being registered as blind.

● **Mobility training**—Mobility officers for the blind, who can be contacted through the social services, give mobility training for the visually handicapped. Guide dogs for the blind are available in certain circumstances from the Guide Dogs for the Blind Association, a voluntary organisation.

● **Special education and training**—The policy of teaching visually handicapped children in normal schools depends upon the local education authority. There are, however, special schools for severely disabled children where their particular needs are taken into account and specialised equipment and teaching are available. Training in work skills is available at various centres, details of which are available from the RNIB.

● **Organisations and support groups**—Apart from the RNIB there is a weekly radio programme called *In Touch* for the visually handicapped. There is also the *In Touch Bulletin*, which is in braille and available free of charge from the BBC. The BBC also publishes a comprehensive guide to aids and services for the blind.

● **Genetic counselling**—Patients with hereditary visual problems should have the opportunity to discuss the familial implications with a geneticist. Most regions have a genetic counselling service.

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