

Physical Examination of Patients from a Glaucoma Perspective

Many years ago one of our teachers in Ophthalmology said to us during a clinical tutorial: "It is very easy to forget that the eyes are attached to a structure called 'the Body', diseases of which can affect the eyes". He was actually highlighting the fact that a very significant number of ophthalmologists develop 'tubular vision' concentrating only on the eyes of a patient and not considering patient as a whole.

Advantages in carrying out a systemic assessment of patients are many and include:

- (1) Diagnosis, particularly with an atypical presentation
- (2) General management plan
- (3) Surgical decisions

CLINICAL EXAMPLES TO HIGHLIGHT THE ABOVE POINTS

1. Secondary glaucomas are a subgroup of glaucomas having varied and diverse causes. One of the causes being Sturge Weber Syndrome which presents with a dramatic port wine stain on the face. In dark-skinned individuals the port wine stain may not be very obvious and can be missed. The importance of this diagnosis has implications if surgical intervention such as trabeculectomy is being planned since surgical complications such as suprachoroidal haemorrhage is more likely to take place in this type of glaucoma.
2. Most of the glaucoma patients use eye drops for their disease and therefore it is very important that they should be able to use them. If patients have some form of physical disability such as arthritis or limb paresis, the disability is likely to affect compliance. These points have to be taken into account in the clinic as part of the glaucoma management plan.
3. People who have a tendency towards keloid scar formation on their skin are likely to have an aggressive healing response after trabeculectomy. This information is vital to plan treatment

modalities such as introduction of antimetabolites during glaucoma filtration surgery.

SUGGESTED PLAN FOR A QUICK GENERAL EXAMINATION

A systemic examination needs not to be comprehensive or time consuming and neither is it feasible while working in a busy eye clinic to carry out detailed general examination. However important clues can be gained if consciously looked for and can help to focus on a particular area when examining patients on the slit lamp. Taking into the account the following, vital clinical information may be quickly obtained:

- (i) **Gait and General Appearance:**
e.g. Thick neck, tight collar, dementia, cushionoid appearance, arthroptahy.
- (ii) **Face:**
e.g. evidence of facial injury, ptosis, proptosis, thyroid eye disease, heterochromia iridis, skull malformations as part of anterior segment dysgenesis etc.
- (iii) **Skin:**
e.g. Dementia, rosacea, oculodermal melaocytosis, Sturge Weber syndrome, Neurofibromatosis
- (iv) **Hands:**
e.g. arthritis, tremors, Raynaud's phenomena, joint hypermobility.

CLINICAL EXAMPLES

- (i) Pituitary tumours and glaucomas have been reported to coexist in the same individual. Both may cause field defects leading to confusion in diagnosis. The clinical features of acromegaly such as supraorbital ridges, spade-like hands & feet, and thick skin will be noticeable if specially looked for, otherwise they might be missed.

- (ii) Some patients may be having mild dementia which is very easy to be overlooked in the eye clinic. This has multiple implications; firstly they may perform poorly on automated visual field system. Secondly they may show poor compliance towards ocular medication for glaucoma. In such individuals surgical intervention or laser trabeculoplasty may be a better option.
- (iii) Patients from low socioeconomic class who are suffering from effects of poor nutrition may have poor healing which clinically is likely to manifest as wound leaks following trabeculectomy. Early appreciation of this would be an indication for modifying surgical technique (avoiding anti-proliferative agents, less post operative steroids, using non-absorbable sutures)
- (iv) Patients who have thick neck and wearing a tight collar may show an artificially high intraocular pressure during applanation tonometry on the slit lamp.
- (v) Patients who have some degree of ptosis may produce artifactual visual field defects on field testing giving rise to a wrong diagnosis of glaucoma.
- (vi) Patients who are suffering from asthma or chronic obstructive airway disease may be using inhaled or systemic steroids. This steroid usage may be responsible for secondary glaucoma.
- (vii) Obvious respiratory disease with element of bronchospasm would be a contraindication for the use of topical beta blockers for obvious reasons.
- (viii) In traumatic angle recession, secondary peripheral anterior synechiae may mask the angle recession. Under such a situation evidence of facial injury may be a valuable sign that should prompt careful examination. In such cases if surgery is being considered the possibility of lens zonule trauma, retinal dialysis and the increased risk of failure of drainage surgery will affect management².
- (ix) Patients with eczema may develop secondary glaucoma³ owing to the fact that they may be using topical corticosteroids for the skin condition.

The above are just a few examples of how clues obtained from general examination can assist in glaucoma management. This assessment of the patients as a whole and the advantage of fitting together small bits of information and clues cannot be overemphasized.

REFERENCES

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