A “Do It Yourself” Instrument For Squint Evaluation

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Introduction

This instrument enables the examiner to actually see the subject’s eye under cover, and can be easily made.

Materials and Methods

The cover test for near and distance is the most important part of any examination for strabismus and amblyopia. It conveys both sensory and motor information. It can be done with patients of all ages and requires only the minimum of cooperation from a patient, especially a child. This instrument allows the examiner to see the eye undercover directly, unlike an opaque paddle commonly used for the cover test, where the examiner has to peep behind from the side.

This instrument consists essentially of a two way mirror and a light bulb. A two way mirror acts depending on the relative amount of light on either side of it. If the observer is standing on the side with greater illumination he or she cannot see the other side which is darker. But if the darker side is lighted up, the observer can see through the mirror. When the mirror is placed in front of the eye to be examined, the patient can see through the mirror, but the examiner cannot. When the bulb is put on, there is relatively more illumination on the patient’s side and the patient can no longer see through, thus dissociating binocular fixation. In effect the eye is ‘under cover’, but the examiner can still see the eye.

A circular piece of clear plastic was cut out from the box of the US IOL lens. Then silver sun control film was pasted on both sides. The reflector part of a pen-torch was removed to leave the bare bulb. The circular mirror was then attached to the torch as shown in the illustration.

This occluder is especially useful in the evaluation of phorias and intermittent exotropias, mainly the good and the fair control types. It is also useful in the examination of dissociated horizontal and vertical deviations, where the tortional component, or a latent nystagmus can be observed. It is very useful in evaluating the extent of deviation of the dominant eye under cover which would otherwise return to fixation rapidly as soon as an opaque cover is removed.
OPHTHALMIC HISTORY

ARGYLL ROBERTSON AND THE PUPIL

Towards the middle of the nineteenth century, Ophthalmology developed into a specialty in its own right, helped by the work of many people including Helmholtz who invented the ophthalmoscope. One of the first to devote himself exclusively to Ophthalmology was the man best remembered for the abnormal pupil he described………

Douglas Moray Cooper Lamb Argyll Robertson, to give him his full name, was born in Edinburgh in 1837. His father, John Argyll Robertson was a General Surgeon, practising in Edinburgh with a special interest in eye surgery.

After his schooling at Edinburgh, Argyll Robertson went to the University of St. Andrews in Fife, which was the oldest in Scotland and the third oldest in the entire English speaking world. He completed his Medical studies in 1857 which was the year his father died.

Graduating at the age of twenty, he first worked as House Surgeon at The Royal Infirmary in Edinburgh and then went to Berlin to pursue his interest in Ophthalmology. There he studied under Albrecht von Graefe, the leading Ophthalmologist of that time.

In 1862, he became a fellow of the Royal College of Surgeons. In the March 1863 edition of the Edinburgh Medical Journal, he published an article of great importance on the Calabar bean, the seed of a plant found in Calabar, eastern Nigeria. This seed contained lethal amounts of the tertiary amine physostigmine and was used by the natives to determine if an accused was guilty or innocent. Only those who vomited the poisonous solution would survive and they were then declared innocent.

Sir Robert Christison, one of Argyll Robertson’s teachers, experimented with the Calabar bean and recommended its use for the humane execution of criminals. However it was Argyll Robertson who by instilling a drop of the extract into his own eye first described the miotic effect of physostigmine. His prediction that it would become a valuable agent in the ophthalmic pharmacopoeia was soon realized when that very same year, his former teacher Von Graefe used it before iridectomy.

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