

Notes on Ophthalmic Nursing.*

By GEORGE MACKAY, M.D., F.R.C.S.E.,
Senior Ophthalmic Surgeon to the Royal Infirmary, Edinburgh.

Anyone who wishes to undertake the skilful and intelligent nursing of ophthalmic cases should seek to acquire the following qualifications:—

1. A general acquaintance with the anatomy and physiology of the orbit, its contents, and the neighbouring parts.

2. A sound training in the general management of medical and surgical patients.

3. A firm faith in, and practical devotion to, aseptic methods.

4. A familiarity with the special apparatus, dressings, instruments, and technique employed by the surgeon to whose clinique or practice they are attached.

5. A gentle hand, good vision, an observant mind, and perhaps, in especial degree, sympathy and patience with sufferers deprived less or more of the use of their eyes, and partly or wholly dependent on sighted companionship to guide their movements, soothe their pain, allay their fears, or divert their attention from unwholesome introspection.

ANATOMY AND PHYSIOLOGY.

If one makes a vertical section through the orbit from before backwards, one notes first how the eyelids are merely special folds of the skin adapted for the purpose of covering and protecting the sensitive globe or eyeball upon which the sense of sight mainly, though not wholly, depends.

The hairs of the eyebrows and of the eyelids are specially developed to aid in preventing sweat and dust from coming in contact with the eye. The mucous membrane—the conjunctiva—which lines the posterior surface of each lid, is a continuation from the skin surface, and being reflected from the eyelids to the surface of the eyeball, gives a smooth lining to the pouch—the conjunctival sac—in which the globe turns easily, but at the same time is fettered and restrained in its range of movement behind the lid aperture. Little glands, secreting fatty material, lubricate the lashes and lid margins in health (a common sty is due to inflammation in one of these). Other glands, secreting mucus, are scattered over the conjunctival surface. Tucked beneath the upper border of the bony arch of each orbital cavity is the almond-shaped lachrymal gland, which secretes the tears to cleanse and moisten and give lustre to the eyeball, express grief, or melt

the stony-hearted. In ordinary circumstances the tears make their escape mainly by evaporation, but a further outlet is provided by a pinpoint aperture near the inner end of each lid, which leads into a little canal passing beneath the skin to a small bag—the tear sac—from which a duct—the nasal duct—descends into the cavity of the nose, whence the tears are evaporated or swallowed, or consigned to a handkerchief.

The membrane which lines the nose lines the tear duct also, and nasal disorder—*e.g.*, a catarrh in the nose—a common cold in the head—often leads to obstruction of the tear duct, with consequent watering of the eye, and, what is more serious, septic organisms from the air passages can readily make their way up to the tear sac and on to the eye itself or *vice versa*. This is a point of the highest importance in connection with wounds and operations on the eyeball.

The eye itself is a globe about one inch in diameter, composed of a dense white opaque-fibrous tissue (the sclerotic), except over the front part, where an area about the size of a threepenny piece, the cornea, is marvellously clarified to provide the combination of a bow-window and a lens, permitting the entrance of light and assisting in its being focussed within the eye. Just behind the cornea is a little space—the anterior chamber—filled with pellucid fluid, the aqueous humour, which warms and supports the back of the cornea and separates it from the circular curtain, the iris, whose variegated surface gives the colour to the eye by which we ordinarily describe the eyes of our friends. This curtain has a central aperture—the pupil—which helps to concentrate the light which is entering the eye, and reflexly regulates its amount by contracting when the light is bright and expanding when it is feeble. The pupil contracts also when a near object is looked at, and so intimate is the association of the two eyes through the nerves and brain connections that the admission of light to one eye, or the employment of one eye in near work—*e.g.*, reading or sewing—affects the pupil of the other eye, even though it be covered. Some drugs dilate the pupil—*e.g.*, cocain and atropin; some contract it—*e.g.*, pilocarpin and eserine.

The coloured iris is the middle part of the middle coat—choroid—of the eye, and as we trace the one back to the other we pass through a very complex zone—the ciliary region—from whose surface the aqueous fluid is secreted, and in whose substance is lodged the tiny muscle—ciliary muscle—by means of which we are able to alter the focus of each eye according as we wish to get an image of a distant or a nearer

* A lecture delivered to nurses at the Royal Infirmary, Edinburgh, February 23rd, 1910.

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