Nursing of Diseases of the Eye.

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DISEASES OF THE LENS.

The onset of senile cataract is gradual, and presents no marked symptoms. The striæ can often be seen, when the patient faces the light, as white or light grey lines converging from the edges of the pupil. The lens itself, in old people, especially in those of dark complexion, reflects a large amount of light, and the pupil consequently looks greyish rather than black. A diffuse grey colour of the pupil therefore does not mean of necessity the presence of cataract. The small striæ are, however, definite evidence. If the fundus be illuminated by the ophthalmoscope any opacities present stand out as dark lines against the red reflex. This is the simplest and most certain method of deciding on the presence or absence of cataract. A few striæ in the lens do not necessarily mean any loss of visual acuity. Probably a large proportion of people above the age of seventy have considerable peripheral striation. So long as the lens within the area of the pupil is not encroached on, this is absolutely innocuous.

Frequently such striæ are hardly at all progressive, but in the majority of cases the opacity gradually spreads and involves all the cortex between the nucleus and the lens capsule, the course taking many months or even years.

Eventually the whole cortex becomes opaque, and the cataract is said to be "mature." This is the most favourable time for operation, and therefore we must be able to recognise it. So long as any clear cortex remains under the capsule, we shall see when light is thrown obliquely from the side on to the eye that the pupil does not look uniformly grey—a darker crescent, the shadow from the iris, lies on the side from which the light shines. If the stage of maturity is reached the colour of the pupil is grey all over. After a time the opaque cortex of the mature cataract liquefies, the nucleus remaining as a solid mass in the middle of the fluid. This form of hypermaturity is called a Morgagnian cataract. The nucleus slowly decreases in size as its outer layers disorganise and are dissolved; there is sometimes scarcely any fragment after many years. Occasionally the liquid contents are absorbed, and only the thin transparent capsule remains, in which case the cataract is spontaneously cured. Or the capsule may be ruptured and the fluid escape into the aqueous chamber, where it is easily disposed of.

The diagnosis of senile cataract depends to a great extent on the use of the ophthalmoscope. The chief symptom—gradual failure of vision—is common to many other diseases, apart from increasing opacity of the lens, and the grey reflex from the pupil is not sufficient to enable us to pronounce definitely on the presence of opacity sufficient to account for the failure.

In chronic glaucoma—a disease which will be treated of in a later lecture—the lens often presents an appearance of loss of transparency, though it may be to all intents and purposes normal; and, as a matter of fact, this disease is too commonly wrongly and fatally diagnosed as commencing cataract owing to inability to use the ophthalmoscope.

If light be thrown into an eye with an ophthalmoscope mirror, the pupil will be seen to glow so long as the media are transparent; any opacity of the lens stands out as a dark mass against the bright red background.

When a cataract has been diagnosed, we have to find the cause, in order that we may give a reasonably accurate forecast of the result before operation. The urine must always be examined to discover the presence or absence of albuminuria or diabetes, which will have important bearings on the course and prognosis, even if it have not been the actual cause of the disease. In young people the sudden appearance of a cataract will raise the suspicion of an injury, and they must be carefully questioned, and the cornea and globe closely examined to enable us to detect any scar which will show the entrance of a foreign body. Not every cataract should be operated on. I have pointed out that extensive disease of the fundus often is complicated by lenticular opacity. Clearly an operation cannot restore vision if the retina is hopelessly damaged. We have, therefore, to test each patient and see whether the retina is active behind the opaque lens, and this we do by holding a light in front of the patient in various positions. He should be able not only to recognise the presence of a light, but accurately to locate its position, or, as is commonly said, must have light perception and projection.

It sometimes happens in old people that a small area of disease about the macular region destroys the central vision, although peripherally the eye remains healthy. Nothing is more disheartening to the patient than to find such disease nullify the surgeon's efforts after the removal of the opaque lens. To detect such a small area is difficult. My colleague Mr. Adams Frost suggests that two small flames, such as lighted matches, be held about 2 mètres before the patient and the distance noted at which separation is recognised. If a space of 1 or 2 inches suffices to give separate images, he thinks we can exclude central choroiditis.

One possibility of error must be remembered—the sectors of the degenerating lens do not refract equally. A not uncommon sign of commencing cataract is monocular diplopia.

Whenever any of these functions is faulty the prognosis is seriously disturbed. I have seen, however, uneducated patients who did not seem able

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