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THE CHIEF SYMPTOMS OF OCULAR DISEASE.

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Of the four cardinal symptoms of ocular disease, two, defective vision, and pain are subjective; two, injection of the conjunctiva and œdema of the lids, are objective. The causes of loss of vision are numerous, and have been already, to some extent, hinted at in the lectures on the physiology of the eye. The defect may occur suddenly, or gradually. All power of vision may be lost in the affected eye, amaurosis, or the loss may be only partial, the condition known as amblyopia.

The fact that the patient discovers the defect suddenly does not necessarily show sudden origin; it is difficult to realise that many people go through life for many years without discovering that one eye is almost useless, but the fact remains.

Not infrequently I am consulted at the hospital by young men who have been rejected by recruiting officers on account of uniocular defect; they have never recognised this until it is discovered by the examining officer, though it is often obvious that the eye must always have been in the same condition from birth. Such a defect, if discovered suddenly, gives rise to no further difficulty to the patient; if a defect suddenly comes on in a previously normal eye it is very unusual to find that the patient can work as well as before.

Many eyes are defective from birth, as has just been pointed out, either from defects in the refractive media or less commonly from defect in the retina or optic nerve. Such eyes are rarely completely blind, and therefore come under the head of amblyopia. Congenital amblyopia from these causes is among the commonest of all, and is stationary.

On the other hand, amblyopia may develop and increase until total blindness, amaurosis, ensues. These cases require the use of the ophthalmoscope for diagnosis. It is well to bear in mind, however, that diseases of the refractive media cannot alone cause amaurosis, with the rare exception when the vitreous is destroyed by hæmorrhage and that perception of light remains as long as the retina and optic nerve are healthy.

Sudden loss of vision points rather to some acute disease, functional or organic, of the percipient nervous structures. Gradual loss is often due to opacity of the media or to some chronic disease.

Where the defect is due to retinal or nervous disease the whole or only a part of the visual field may be affected. The central region may suffer to a greater extent than the peripheral; there may be a local defect (scotoma) marring the macular perception, and preventing the recognition of small coloured objects when fixed directly, while they are readily seen and recognised by the peripheral parts.

This is a common symptom in certain forms of chronic poisoning, either by drugs, lead, tobacco, etc., or by autointoxication as in diabetes. The macular region, however, is also a favourite seat for attack by choroiditus, and this may give rise to a similar scotoma. The ophthalmoscope will at once clear up the doubt.

Pain in or about the eye is a symptom common to very many ocular diseases. It is extremely difficult to describe in words the various characters of pain, and yet the value of such subjective symptoms is great. Unless we make some attempt, therefore, to separate the varieties, it is more than likely that the reader will give up the attempt to classify them for himself, and will lose thereby a great aid in diagnosis.

It is well to remember that comparatively few of the deeper affections of the globe, such as require, that is to say, the use of the ophthalmoscope for diagnosis, are ever associated with pain unless they are also accompanied with signs of some external inflammation. As Mr. Berry, of Edinburgh, has pointed out, "As a general rule, always excluding the cases where there is a visible inflammation, the greater the pain complained of, the less likely is it to depend upon any pathological condition at all which can be referred to the eye."

The pain may be divided into inflammatory and non-inflammatory, according as to whether it is associated with definite inflammation of the globe or not. Some cases lie on the border line, but these are fortunately at once the least severe and the most easily remediable.

Certainly the commonest of all causes which give rise to ocular discomfort are errors of adjustment both refractional and muscular. These are sometimes lumped together with other disorders, as asthenopia. A hypermetrope almost always finds some difficulty in reading if he attempt it for many hours a day; the eye and lids smart and burn, and often get red. The pain is not often severe, however, but rather discomfort. It is often described as a feeling of sand, and is due probably to slight roughness of the lids. It is questionable whether this should be classed among non-inflammatory pain, because the symptoms appear really to depend on the slight hyperæmia and conjunctivitis, which is kept up in some ill-understood way by the hypermetropia and consequent strain.

Apart from this, however, hypermetropia, and still more astigmatism, are very commonly associated with frontal headache and general tender-

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