

some children, who may be otherwise bright and capable, there is some congenital mal-development of the brain which makes learning to read extraordinarily difficult or even impossible. A series of these observations has been made by Hinshelwood, Kerr, Nettle-ship, and others. They resemble certain cases of disease in adults when the memory for reading is lost. The acuity of vision, if tested by counting dots or any other means except reading, is normal; letters, however, convey no meaning to their minds.

I have seen two or three such children; they are usually brought to the ophthalmic surgeon, as the parents think the defect is in the eyes; it is a curious fact that they are almost always much less at sea with figures; many of them can read figures with some fluency, perhaps because the number of symbols is small.

The symptoms which call attention to a child's eyes will differ to some extent with the form of the defect; the chief symptoms are inability to see as well as the normal child should, and pain and discomfort after use, but apart from those there may be symptoms and signs which have at first sight nothing to do with the eye, and which, therefore, are very readily passed over by the uninstructed as of no diagnostic importance. Thus, for example, a constant tilt of the head, accompanied in some cases by a compensatory curvature of the spine, may point to a particular form of astigmatism.

Difficulty of seeing the blackboard may be myopia; difficulty of reading will probably be hypermetropia; but the last named may be the cause of a perpetual frown, the first the cause of a constant closure of the lids.

Digestive disturbances, vomiting, and, as it is called, "biliousness," may often be relieved by the use of suitable glasses.

In hypermetropia, which is the commonest form of eye disease, the retina is too near the lens, and the focus of the refractive media at rest, is behind the retina; accommodation can bring the rays to a focus, by making the lens more convex, but this involves a constant strain. The hypermetropic child rarely, except in the highest degrees, complains of any difficulty in seeing. His accommodation is so active that he can compensate for a high error without obvious discomfort, but secondary symptoms are very frequent. The continuous nervous effort soon causes exhaustion, especially in ill-nourished, delicate children, and this shows itself by headache and pain in and about the eyes and brow, after any prolonged use.

The eyes and lids are reddened and swollen;

often there are scales along the hair follicles, and the lashes fall out. The congestion prepares the eye to receive any infection. Ulcers of the cornea, and inflammation of the lid-margin are most common sequelæ.

Chronic blepharitis alone is enough to make the surgeon sure of the presence of some error; usually hypermetropic astigmatism.

Apart from these external troubles, the children often complain that the type of their book changes colour, becoming red, or less commonly blue.

Such children are often regarded as stupid and dull, when the fact is that their eyes are unable to undertake prolonged work without a breakdown. The excessive strain which follows the necessity for accurate vision, overtaxes the entire nervous system. Since the hypermetrope has to combine excess of accommodation with a normal convergent effort, muscular abnormalities are extremely common among such eyes.

Squint is one of the most formidable as well as one of the most common results of hypermetropia. The hypermetrope has the relation between his power of accommodation and convergence upset. Some hypermetropes learn early that it is easier for them to exercise the necessary amount of accommodation if they call in an excessive amount of convergence, which causes the visual axes to cross, not on the object, but at a point on the hither side.

This means that the image of the object falls on the macula of one eye only, and therefore there must be double vision, diplopia, unless the image of the squinting eye be suppressed.

The constant suppression of the image from the squinting eye has a very harmful effect on its visual power; few deviating eyes long retain their potential acuity of vision. In the early stage of squint there is often little difference between the eyes, though the deviating eye is usually worse, and a squint may be transferred by appropriate measures from one side to the other, but the potential acuity rapidly diminishes, and all useful vision may be lost in a few months, never to be regained.

If a squinter be taken in hand early, much may be done. Squint is rarely permanent from its first appearance: in the early stage it comes on at more or less regular intervals, when the eyes are tired, or when any special accommodative effort has to be made; in this stage it is usually curable with comparative ease. When once the deviation is fixed, the squinting eye rapidly loses its power of vision, and especially of central vision, so that it be-

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