THE SYMPTOMS AND CAUSE OF EYE-STRAIN, AND ITS DIAGNOSIS BY THE GENERAL PRACTITIONER.*

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Mr. Chairman and Gentlemen,—I feel that I should almost apologize for introducing to you the subject of Eye Strain; and do not do so on account of any large experience, nor because I can present any original observations, but because it is a field not much occupied by the general practitioner, and, therefore, a favorable one for a few brief, crude, but I hope, practical remarks on a subject which has of late received a great deal of attention from the specialist in nervous diseases, as well as from the specialist in eye diseases.

The diagnosis of this condition, however, is of not less importance to the general practitioner, especially if he is not convenient to the oculist.

I feel sure, both from my own experience and my reading, that it is just as essential, in some of the cases that present themselves to us for treatment, to ascertain whether the patient is suffering from some defect of vision, which may be the cause of reflex symptoms that simply need a pair of spectacles for their relief, as it is in other cases to ascertain the cause of fever, a rigor, or a convulsion; and it can be done more easily and with greater certainty.

Eye-strain may be defined as any abnormal exertion of the ocular muscles, resulting from errors of refraction, or any want of their equilibrium from other causes; the latter we do not intend to discuss.

The most frequent causes are an eye-ball too long, causing myopia, or short sight; or one too short, constituting hypermetropia, or far sight; and variations in each of these conditions called astigmatism.

According to some authorities whose opinions and conclusions are entitled to every respect and consideration, eye-strain often causes such diseases as epilepsy, chorea, hysteria, migraine, bilious attacks (so-called)neurasthenia,dyspepsia,mal-assimilation, and consequently anæmia; one observer asserting that the iron in the spectacle frames do the red corpuscles more good than it would do in pills.

I think, however, I shall not be occupying uncertain ground in stating that headache, migraine, neuralgia, and nervousness, are frequent and persistent symptoms of eye-strain. Reading, sewing, or continued effort at any close work, may produce a wearied, tired feeling not easily described; the eye-balls ache, or the eyes become watery or suffused; after reading for a time the letters run together, there is blurring, and the patient must rest. These or other symptoms may be present, and yet the patient not suspect anything wrong with the eyes. Boys with short sight like their books, while boys with far sight dislike them, and will take to outdoor amusement.

With regard to the importance of headache as a symptom, Dr. Geo. Gould, in a paper read less than a year ago, before the Philadelphia Hospital Medical Society, says that in the first thousand refraction cases that occurred in his private practice, a chief complaint in over 800 was head. ache, and the failures to cure or relieve were not over half a dozen.

Dr. Peter Callan, of the N. Y. E. & E. Infirmary, in a paper in a recent number of the *Jour. of the Amer. Med. Assocn.*, gives it as his opinion that 75 % of functional headaches are due to eye-strain, while other authorities consider that it causes more headache than all other causes combined.

Squint, styes, blepharitis and conjunctivitis, are often due to the same cause, a squint often requiring no operation if a proper pair of spectacles are worn.

As I have intimated, the diagnosis of defects in vision or errors of refraction, which cause eye-strain, is not difficult; needs neither special skill nor expensive instruments. All that is required is a card of Sn's Test Type for distance, and it is better to have two differently lettered.

Each line has a number that indicates the number of feet distant at which the line should be read by those whose vision is normal, *i.e.*, the first letter marked 200, should be read at 200 ft. distance; the line 40 should be read at 40 ft. distance; and so on; and those whose vision is normal can always read the line numbered 20 at 20 ft. distance, and this is the distance the card should be placed from the patient in a good light. If you cannot place it 20 ft., 15 feet will do, and then the line marked 15 should be read.

Each eye is now to be tested separately, and a

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