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Ocular Headaches.

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OCULAR HEADACHES.

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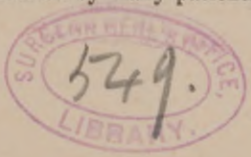
If a patient complains of headaches, pain in the eyes and poor vision, the probability of a refractive error being the cause is now very generally recognized. If, however, the sight is apparently normal, there is little or no discomfort in using the eyes for near work; and especially if the headaches are not frontal, an ocular defect as a possible cause does not usually receive much consideration. It is, nevertheless, a fact that a large number of patients, who have good sight both for distance and near, and who are able to read and sew for hours at a time without discomfort, suffer from migraine and neuralgic headaches, frontal, temporal, occipital and general, that can be entirely relieved by the correction of some refractive or muscular defect.

Strümpel, in his "Text-Book of Medicine," after mentioning a number of remedies that can be tried in the treatment of habitual headaches, concludes the chapter with the following paragraph:

"We can sometimes do the patient good service with remedies mentioned, but in other cases the evil obstinately defies all attempts at cure. Then, however, the patient has still the encouragement left that the disease often ceases at last spontaneously in advanced age, after lasting for years and years."

The oculist is consulted by many patients who give



a history of past headaches that have lasted for "years and years," and that have finally ceased spontaneously. They usually present themselves between the ages of forty-five and sixty, and are found to have a moderate degree of astigmatism or hypermetropia, the correction of which earlier in life might have prevented years of suffering from habitual headaches. It is not difficult to understand why reflex ocular headaches should cease at this time of life. The emmetropic eye, as we know, sees distant objects clearly without any effort of the accommodation, and at the reading distance by increasing the convexity of the crystalline lens three dioptres. The hypermetropic or astigmatic eye, on the other hand, finds it necessary to accommodate for distance as well as for near, if clear vision is to be obtained. As an illustration, if an individual with a hypermetropia of three dioptres sees distant objects clearly, he must use three dioptres of accommodation, — the amount used by the emmetropic eye in reading, — and six dioptres, or double this amount, for his near work. In early youth, when the accommodation is most active, this extra work is accomplished without much difficulty; as he grows older, the effort to maintain clear vision becomes greater and greater, in consequence of the natural failure of accommodation until, with advancing years, the time comes when the power is not strong enough to overcome the defect, and soon ceases to attempt it. So long as the struggle for clear vision continues, so long may we look for headaches or other reflex troubles as a result. With a cessation of this struggle what is more natural than that "the disease" should "cease at last spontaneously after it had lasted for years and years." Another interesting point in connection with the fact, that symptoms of eye-strain are present only when an attempt is made to correct the defect, is, that individuals having very high degrees

of hypermetropia or astigmatism are much less liable to pains in the eyes and headaches than are those having small and moderate degrees. A patient with four or five dioptres of astigmatism will consult an oculist, in a large majority of cases, not because he has asthenopia or severe headaches, but on account of poor vision. In other words, he has found it impossible, even by the greatest effort of the accommodation, to obtain clear vision for any length of time and has ceased early in life to make the attempt. On the other hand, we see patients with one-half or three-quarters of a dioptre of astigmatism who see perfectly well both for distance and near, but who do so at the expense of an extra strain on the accommodation and who often suffer severely in consequence.

The following cases which I report are not exceptional, but will serve to emphasize one or two points which I wish to make prominent in this paper, namely, that patients may suffer for years from ocular headaches and yet have little, if any, local eye symptoms that will suggest their origin. The sight may be good, they may be able to use the eyes constantly for near work with little or no discomfort, and in some cases the pain may be confined principally to an area more or less remote from the eyes.

Case I. A lady, forty-five years of age, was first seen April 28, 1891. She has always had headaches, usually as often as once in two weeks, frequently two or three in a week. During school life had sick headaches, but the last few years they have been mostly neuralgic. Pain usually begins over the eyes and becomes general, but is sometimes confined to occipital region. She has always seen perfectly well for distance and near and the eyes have never ached until within the last year or two. An examination under homatropine gave the following results: vision of the

right eye normal, hypermetropia two and a half dioptres, vision of the left eye normal, hypermetropia three and a quarter dioptres, no insufficiency or other ocular defect. Glasses correcting the refractive trouble were ordered for constant use. The patient reported after using glasses for five weeks, that there had been no headaches or pains in the eyes during that time. She was again heard from five months later, and there had been no return of the headaches.

Case II. A gentleman, fifty-two years of age, consulted me July 20, 1889. The trouble complained of was poor sight for distance and near. Until within the last two or three years, he has seen perfectly well for distance, but has used glasses for reading for about seven years. The eyes have never ached or given other signs of being strained. He has been subject to severe neuralgic headaches all his life. Until lately he has had from one to three attacks a month, now much less frequent and not as severe. They are usually at the back of the head, the pain extending into the neck and shoulders, sometimes at the side of the head, rarely over eyes. Upon examination he was found to have hypermetropia of one and a quarter dioptres in the right eye, and one and three-quarters in the left. With correcting glasses, distant vision was normal. No insufficiency or other ocular defect. Glasses correcting the hypermetropia were ordered for distance and appropriate ones for near work. There is little in this case that would suggest eye-strain as the cause of the neuralgia, but the probabilities are, that if glasses correcting the refractive error had been worn constantly from early youth, the patient would have been saved much suffering. The good vision he has enjoyed for years has been obtained by overworking the ciliary muscle. The inability to do this work results in a failure of sight, at about which time there

is also a marked decrease in the frequency and severity of the headaches.

Case III. A gentleman, twenty-five years of age, book-keeper, first seen February 2, 1890. He has had severe headaches for a number of years, top and back of head. Has dull pain in the head most of the time. Lately has had dizzy spells and occasional pains in the eyes at night. Sees perfectly well both for distance and near. Upon examination, under homatropine, he was found to have three-quarters of a dioptre of hypermetropic astigmatism, each eye, axes vertical. Eyes otherwise normal. Glasses correcting the astigmatism were prescribed for constant use. The patient reported three months later that the headaches and dizzy turns had ceased soon after he began to use glasses and had not returned.

Case IV. A gentleman, forty-one years of age, first seen May 6, 1891. He had had headache for a number of years, frequent, but not of sufficient severity to confine him to the house. Usually wakes with a headache if he has been to the theatre the night before, or read late. The pain is frontal and in the top of the head. Has always been a great reader. Sees perfectly well, and eyes have never ached until lately, and not enough now to prevent his using them a number of hours daily for near work. Upon examination he was found to have a quarter of a dioptre of hypermetropic astigmatism in the right eye, and double this amount in the left, axes vertical. Glasses correcting the defect were prescribed for constant use. He was heard from about four months later, and there had been little or no headache since using them.

It is unnecessary to mention other cases, which would simply be a repetition of histories that are familiar to every practitioner. All functional headaches do not of course result from eye-strain, but eye-

strain is a sufficiently common cause to make an examination of the eyes advisable when internal or other treatment does not result in a cure after a reasonable length of time. A dose of phenacetin, antipyrine, or of various other remedies will often result in a cessation of pain, but they may also prove of equal value in controlling the neuralgic pain which accompanies iritis; and yet the iritis, the cause of the pain, is probably neither better nor worse for such treatment. It is impossible to say just what per cent. of functional headaches result from eye-strain, but I should be very much surprised, if out of one hundred unselected cases, at least one-half, or fifty per cent. were not greatly benefited or entirely relieved by the correction of some refractive or muscular defect. An occasional headache may, of course, occur in the most pronounced ocular type, even after the trouble is fully and actively corrected, for the reason that the proper position of the glasses before the eyes is not always maintained, and their constant use is even neglected, but that the relief will be such in this per cent. of cases as to leave little doubt in the minds of the patient and physician as to the origin of the trouble, I most certainly believe.

To show that this is not merely the enthusiasm of a specialist, I may say that my friend Dr. G. L. Walton has recently assured me that in cases complaining of cephalagia, and especially migraine of long duration, after eliminating organic diseases and toxic and syphilitic influences, his first suspicion is that an error of refraction exists, a suspicion so often verified by experience, that he considers the estimate above named a very conservative one.

It is not difficult to see why ocular defects should be such a potent factor in the causation of headache. In our present civilization, where the ability to read and write is so general, and where the demands made upon

the eyes for near work are so rapidly increasing, we find ourselves provided with visual organs that are by no means perfect in their optical construction, though well adapted to the requirement of the savage and even to the larger proportion of our ancestors of a hundred and fifty years ago. To the student, the bookkeeper or the sewing woman, the ability to see distant objects clearly is but of secondary importance; the thing most to be desired is the ability to see near objects clearly, with as little muscular effort as possible. The individual with a myopia of three dioptres would seem, therefore, best fitted for an occupation requiring the long-continued use of the eyes in near work, in that no accommodation effort is necessary for clear vision at the reading distance.

In conclusion, I wish to say a word in regard to the advisability of correcting ocular troubles in the more serious forms of functional nervous disturbances. To say the eye-strain is a very frequent cause of epilepsy and chorea, would be to mark one's self as an enthusiast; but I am thoroughly convinced that many cases can be relieved indefinitely by a correction of some refractive or muscular defect. The expression "relieved indefinitely" is used advisedly, in preference to "cured," for the reason that eye-strain cannot be regarded otherwise than as an exciting cause in precipitating the nervous affection, a predisposition to which already exists. If an epileptic is found to have a refractive error, and if a correction of this error results in a cessation of the attacks, the treatment cannot be regarded as valueless because the trouble ultimately returns. It should rather be regarded as a proof that reflex irritation is capable of precipitating the attack, and should lead to a careful search for other possible exciting causes.