BLEPHARITIS AND AMETROPIA.

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IN the discussion at the International Ophthalmological Congress last September, on the paper of Dr. Roosa, entitled, "On the Relations of Blepharitis Ciliaris to Ametropia," I remarked that I had for more than two years noticed this connection, and have been in the habit of examining every case of blepharitis that comes to my office for errors of refraction, and have never failed to discover some one or the other, if not a combination of anomalies.

To substantiate the correctness of Dr. Roosa's remarks as well as my own, I present the following statistics of cases observed in my private practice the past year (1876).

February 7.—Mr. F., æt. 19. Has had blepharitis the past two years. Lids always worse on use of the eyes.

V = $\frac{20}{XX}$; after atropine, $\frac{20}{XXX}$; with +48 = $\frac{20}{XX}$.

Hypermetropia, $\frac{1}{48}$.

February 25.—Mr. C., æt. 28, complains that for years he has had trouble with the edges of his lids.

L. E., convergent strabismus 1′′′;

L. E., V = $\frac{2}{C}$;

R. E., V = $\frac{20}{XL}$; after atropine, $\frac{20}{LXX}$;

R. E., with +9, V = $\frac{20}{XX}$.

L. E., with +9, V = $\frac{10}{C}$.

Since use of glasses, no return of blepharitis.

February 27.—Miss H., æt. 15; blepharitis the past year.

V = $\frac{20}{XX}$; after atropia, $\frac{20}{XXX}$; with +36, $\frac{20}{XX}$.

Hypermetropia = $\frac{1}{36}$.

February 29.—Mr. M., æt. 24; blepharitis for the past two or three years.

V = $\frac{20}{XX}$; after atropia, $\frac{20}{XL}$; with +36, $\frac{20}{XX}$.

Hypermetropia = $\frac{1}{36}$.

March 3.—Master J., æt. 16; the past year has been applying his eyes to close and fine work in a machine-shop, and has noticed an inflammation and eruption on the edges of the lids.

V = $\frac{20}{XX}$; after atropia, $\frac{20}{XXX}$; with +36, $\frac{20}{XX}$.

Refraction, hypermetropia, $\frac{1}{36}$.

March 7.—Master McC., æt. 10; edges of the lids inflamed the past six months; always worse on attempting to study.

V = $\frac{20}{XX}$; after atropia, $\frac{20}{XXX}$; with +42, $\frac{20}{XX}$.

Hypermetropia, $\frac{1}{42}$.

March 17.—Miss G., æt. 20; edges of the lids inflamed for some time. Cannot read nor sew with comfort; pain in the eyes and over brow, and in the back of the head.

V = $\frac{20}{XX}$; after atropia, $\frac{20}{XL}$.

R. E., +40 ⊃ +60c, 90°, V = $\frac{20}{XX}$.

L. E., +48 ⊃ +60c, 90°, V = $\frac{20}{XX}$.

Refraction, compound hypermetropic astigmatism.

March 22.—Master G., æt. 14; blepharitis for three or four years; reads much; lids always worse after reading.

V = $\frac{20}{XX}$; after atropine, $\frac{20}{XXX}$; with +48 $\frac{20}{XX}$.

Hypermetropia, $\frac{1}{48}$.

March 29.—Mr. D., æt. 28. For the past five years edges of the lids have been inflamed; kept pulling the ciliæ out, but no relief.

V = $\frac{20}{XXX}$; after atropine, $\frac{20}{LXX}$; with +20, $\frac{20}{XX}$.

Hypermetropia, $\frac{1}{20}$.

April 8.—Miss G., æt. 24; blepharitis.

V = $\frac{20}{XX}$; after atropia, $\frac{20}{XXX}$; with +48, $\frac{20}{XX}$.

Insufficiency of L. rectus internus, 4°.

May 22.—Mr. C., æt. 23; blepharitis.

V = $\frac{20}{XX}$; after atropia, $\frac{20}{XL}$; with +30, $\frac{20}{XX}$.

Refraction, hypermetropia, $\frac{1}{30}$.

June 5.—Mr. McL., æt. 26; blepharitis R. E. the past two years; nothing would cure it.

R. E., V = $\frac{20}{XX}$; after atropia, $\frac{20}{XXX}$; with +48, $\frac{20}{XX}$.

L. E., V = $\frac{20}{XX}$; after atropia, $\frac{20}{XX}$; emmetropic.

The R. E. recovered soon after the use of the glass, and has remained well ever since.

June 19.—Mrs. H., æt. 25; has had blepharitis since nine or ten years of age; has tried everything without a successful and permanent cure.

V = $\frac{20}{XXX}$; after atropia, $\frac{20}{LXX}$; with +30, $\frac{20}{XX}$.

In one week after wearing the glasses and treatment, the lids were almost well, since which time she has had no return of the old inflammation.

July 7.—Mr. B., æt. 26; lids have been inflamed for some time.

V = $\frac{20}{XX}$; after atropia, $\frac{20}{XXX}$; with +42, $\frac{20}{XX}$.

Hypermetropia, $\frac{1}{42}$.

August 12.—Mr. W., æt. 28; for three or four years his eyes have troubled him; is a bank clerk, and every day about noon there comes a pain in the head, which remains until finished with his duties; edges of the lids are much inflamed.

V = $\frac{20}{XX}$; after atropia, $\frac{20}{C}$; with +16, $\frac{20}{XX}$.

Hypermetropia, $\frac{1}{16}$.

Since using the glasses, lids have recovered their natural look, and there is no return of the daily pain in the head.

October 17.—Master L., æt. 14; blepharitis the past six months.

V = $\frac{20}{XX}$; after atropia, $\frac{20}{XXX}$; with +42, $\frac{20}{XX}$.

Refraction, hypermetropia, $\frac{1}{42}$.

October 19.—Mr. A., æt. 31; for several years eyelids have been red and scaly.

V = $\frac{20}{XX}$; after atropia, $\frac{20}{XX}$ dim, +48^c, 90°, $\frac{20}{XX}$ sharp.

Simple hypermetropic astigmatism, +48^c, axis 90°.

October 30.—Master A., æt. 15; blepharitis five years' duration.

V = $\frac{20}{XX}$; after atropia, $\frac{20}{XXX}$; with +48, $\frac{20}{XX}$.

Hypermetropia, $\frac{1}{48}$.

November 7.—Mr. S., æt. 30; blepharitis one and a half years.

V = $\frac{20}{XX}$; after atropia, $\frac{20}{XXX}$; with +48, $\frac{20}{XX}$.

November 10.—Miss P., æt. 20; for a year past, blepharitis.

V = $\frac{20}{XX}$; after atropia, $\frac{20}{XL}$; with +30, $\frac{20}{XX}$.

November 15.—Miss W., æt. 19; blepharitis for over two years.

V = $\frac{20}{XX}$; after atropia, $\frac{20}{XL}$; with +36, $\frac{20}{XX}$.

Hypermetropia, $\frac{1}{36}$.

December 6.—Mr. J., æt. 27, has had inflammation of the edges of the eyelids for six years; has undergone much treatment without any benefit.

V = $\frac{20}{XX}$; after atropia, $\frac{20}{LXX}$; with +24, $\frac{20}{XX}$.

Since the use of the glasses, eyes have improved steadily, and are now almost well.

December 8.—Mr. H., æt. 21; blepharitis the past year. The lids are better when not using his eyes.

V = $\frac{20}{XX}$; after atropia, $\frac{20}{XL}$; with +30, $\frac{20}{XX}$.

Hypermetropia, $\frac{1}{30}$.

The accommodation was paralyzed in all the cases before the examination was made, so that a complete result could be obtained.

It will be noticed that all the cases were hypermetropic, and in a very great majority of them of a low degree; only two being astigmatic.

I have never seen a case of marked blepharitis get entirely and permanently well under the ordinary treatment until the defect in refraction has been corrected, although the remedies used would improve and apparently cure the disease, but in a short time a relapse would occur, and the shorter would be the time for the relapse, if the eyes were used steadily and much at fine or close work.

Exact observation of such cases is what is needed now, and accumulations of experience may show the fact of ametropia

being in many if not all cases the direct cause of blepharitis.

In the case of date June 5, above described, the hypermetropia was the cause of the blepharitis without doubt, as the lids of the one eye only were affected, and this was the hypermetropic one, while the other was normal and no defect of refraction could be found.

In my clinic during the same time there were twenty-four cases of blepharitis, all of which could not be examined under the action of atropia, but by the ophthalmoscope were determined, five hypermetropes of $\frac{1}{48}$, five of $\frac{1}{36}$, one of $\frac{1}{42}$, three of $\frac{1}{30}$, one of $\frac{1}{24}$, one of $\frac{1}{20}$, one of $\frac{1}{16}$, and one presbyope of $\frac{1}{36}$, four not determined, of which one was only two years old, two of three years, and one four years of age.

The question would naturally arise, "How can ametropia be a cause of blepharitis?"

That ametropia of any kind or form causes in all acts of vision a strain more or less upon the eye, which creates a fulness or hyperæmic condition of the neighboring parts, is a well-known fact, as is seen in many such cases by red and congested conjunctiva and edges of the lids. In cases where the strain is such as to create a continued hyperæmia of the edges of the lids, the extremely fine ducts and external openings of the small sebaceous glands (Zeiss's glands) that are to be found in the canals and follicles of the ciliæ become closed by pressure from the swelling of the tissue and vessels surrounding them, and having no outlet for the natural secretions, which are now increased by the hyperæmic condition, a choked status is formed, and inflammation and suppuration take place, as is noticed in the little pus bead that is found encircling the cilia and extending down the canal to the gland.

Rest of the eyes, with proper local treatment, removes in time this suppurative and inflammatory action and apparently the whole disease is cured; but on resuming active use of the eyes the same condition of hyperæmia returns, with eventually the whole former trouble.

But when the ametropia is corrected, and the strain on the eye removed, there will be no return of the condition of hyperæmia, and a perfect cure of the blepharitis can be made.

Since the meeting of the congress I have looked over the following recent works on ophthalmology: Stellwag, Wecker, Galezowski, Schweigger, Wells, Graefe und Saemisch, Tetzer-Gruenfeld, Von Graefe's Archiv, Zehender's Monatsblätter, Ophthalmic Hospital Reports, Annales d'Oculistique, Journal d'Ophthalmologie, Archives for Ophthalmology and Otology, Donders on Accommodation and Refraction, and Nagel's Jahresbericht, without finding any mention of this connection of ametropia and blepharitis. So that Dr. Roosa is the first to publish the fact and call attention thereto, although, without any communication with him, I have known and acted upon it in my practice for more than two years, and brought it to the notice of some of my colleagues.

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