

## REVIEW.

# PROGRESSIVE NEAR-SIGHTEDNESS

IN SCHOOL CHILDREN.

THREE CASES OF

## ACUTE INFLAMMATION OF THE MIDDLE EAR.

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We propose to treat this work upon its merits as a scientific production from the pen of a gentleman claiming special knowledge of his subject.

Speaking of the hypermetropic eye, which he terms the "over-sighted eye," he says "rays of light are focused behind the retina or perceptive layer." They are not focused at all; they are reflected or absorbed. Light passing through the crystalline lens of the hypermetropic eye comes in contact with the retina and is lost in the choroid before the focal distance has been reached; and to say that such rays are focused is an absurdity that no one would attempt to defend.

Speaking of prophylaxis, he says: "By approaching the object closer, causing strong convergence, the eye is pressed upon by the lateral muscles." This assertion leads the reader to infer that the muscles attached to the globe play an important part in the function of accommodation. Such, however, is not the case. Accommodation is an inherent power of the crystalline lens to change its own form so as to focus the eye for vision at different distances, and is perfect in many cases when the muscles attached to the globe are paralyzed.

In referring to the dangers of progressive myopia (near-sightedness), he says: "Another very serious complication is staphyloma posticum, which is an atrophying of the choroid, or bloody pigmented coat of the eye, from the distension the organ undergoes in the lengthening of its antero-posterior axis."

If atrophy of the choroid constitutes posterior staphyloma, we confess our ignorance of the cause of progressive myopia. Stelwag, Donders, and, in fact, every writer on this sub-

ject of acknowledged distinction, considers staphyloma posticum to depend upon an imperfect development of the scleral wall at the temporal side of the optic nerve entrance, followed by such tension during active accommodation as to produce bulging of the sclera, thus subjecting the choroid to an amount of stretching sufficient to induce atrophic changes in its structure.

The profession generally had heretofore considered the affection of the choroid as one of the results of posterior staphyloma.

Speaking of the treatment of myopia, Dr. Cheatham says: "When it is only of a small degree, no glasses are necessary." "This thing of suiting glasses is one of the most difficult subjects with which oculists have to deal; not so much trouble to decide as to what glass is needed, but as to what glass the patient will accept, or rather as what glass will give the greatest comfort.

"I hope to see soon some steps taken to arrest the progress of this disease."

If Dr. C. will examine the common literature of ophthalmology, he will find that correction of the error of refraction, with reasonable care in the use of the eyes, generally arrests the progress of myopia.

In obstinate forms Dr. Derby, of New York, and others nearer home, have arrested the progress of myopia by iridectomy.

Dr. C. says: "Near-sighted eyes should never be suited with glasses without an examination by a good ophthalmoscopist, or without the use of belladonna to overcome any existing spasm of the ciliary muscle."

What relation the ciliary muscle sustains to myopia, and how the presence of spasm in this

muscle may be recognized, and how we are to know that belladonna affects it, Dr. C. fails to explain. Dr. Loring, of New York, shows from dissections, in many cases of high grades of myopia, the ciliary muscle is completely atrophied.

Dr. C. claims to have made original examinations into the cause and degree of myopia in children. His tests were made with Loring's ophthalmoscope without the use of any means of suspending the accommodation. He did not even use "belladonna to overcome any existing spasm of the ciliary muscle." He announces 1,479 tests, and does not record an instance of spasm in the ciliary muscle; nor does he mention the presence of astigmatism.

Donders says: "Without producing paralysis of accommodation, we are never perfectly sure that we determine the refraction in the condition of rest." It is a rule without exception in the practice of all oculists of experience to calculate all optical defects in the eyes of young persons upon the state of refraction during complete suspension of accommodation."

The last three pages of this curious pamphlet are devoted to the announcement of a novelty in otology.

After reporting three cases of acute inflammation of the middle ear, he says: "Where the matter perforates the drum by ulceration, the nutrition of the membrane is so interfered with that it can never recover; the opening never closes." The reverse of this statement is almost universally true in the disease to which he

refers. As a rule, the only instances in which the drum membrane is liable to remain perforated, is when there is great loss of structure, as in cases resulting from the exanthems. The reviewer has seen a case of acute inflammation of both drum cavities which was produced by flooding them with a solution of nitrate of silver. In this instance the perforations on both sides were large and had existed for more than three months before the case was placed under his care. In less than six weeks both tympanic membranes were entirely closed, and it would be an easy matter to point out almost an unlimited number of instances where the membrane has closed after having been ruptured spontaneously by acute suppurative inflammation of the tympanic cavity. "The more the membrana tympani is attacked with the inflammatory process and is involved in it (and this is often the case in the acute exanthemata, or when there is at the same time an acute inflammation of the cavity of the tympanum), the greater the difficulty we shall have in avoiding a perforation of the membrane. However, when other circumstances are favorable, the perforation is not so extremely serious, for generally it may be healed." Troltsch, p. 119.

Roosa, p. 254, says: "Under appropriate treatment, however, the secretion of pus usually soon ceases, the membrane closes up, the hearing is restored, and scarcely a trace is seen either in the anatomical structure or functions of the organ of the disease which has raged so violently."

M. F. C.