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“Quantitative Anemia Theory”

by

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This theory is not my own, but one in which I read during my optometric study. The bibliography is referenced at the end of the paper, but is purposely withheld. The challenge to the group is to discover the author and discuss the merits of his proposed theory for esotropia.

“It has been said that clinical results prove nothing. That is true. Yet in all of the biological professions, the clinical test is the final test of effectivity.”

Given: A blind eye almost invariably rests in exotropia.

Paradox: Often in amblyopic strabismics, the amblyopic or non-fixing eye deviates inward and is esotropic not exotropic.

Question: Why would an amblyopic eye drift inward (i.e. esotropia) when the natural resting position is an outward deviation (i.e. exotropia) as commonly observed in a blind eye?

Theory: “Brain cells and nerve cells are dependent upon a constant and adequate food supply. Failure of such a food supply for a very few seconds results in failure of the nerve cells to function, in fact amounts almost to a paralysis. The amount of food and oxygen supplied to the nerve cells in the brain is determined largely by their vasomotor status, vasoconstriction lessening the food supply, and vasodilation increasing it. But there is another significant physiologic fact which has a bearing here. A quantitatively anemic nerve cell is not only weakened in its power to respond to a stimulus, but it becomes much more *irritable* and tends to over-react to a stimulus. Such over-reaction will exhibit itself in those ocular functions which are controlled by the nerve cells which are for the moment quantitatively anemic. The mechanical and functional status of the upper four thoracic segments of the cord here becomes important because it is these segments which operate through the sympathetic which controls the caliber of the cerebral blood vessels, to say nothing of those in the eyes and the eye muscles themselves. Incidentally, the general systemic status of the sympathetic may also cause quantitative anemia of the brain due to systemic vasoconstriction.”

In other words, the temporary ischemic and malnourished state of the extraocular muscles from vasoconstriction of excessive sympathetic tone results in an nerve and muscle irritation causing a cramp and subsequent esotropia. ***Transient Ischemic Esotropia*** that chronically ensued results in a sensory adaptation embedding a strabismus.

Who has heard of this theory and who is the author?

Hints:

Degrees: D.O.S., M.D., M.S., Ph.D.

Formerly Clinician Macfadden Sanatorium, Battle Creek Michigan

Physician-in-charge Crab Orchard Sanatorium, Crab Orchard, Kentucky

Past President State Board of Optometry, Ohio

Past First Vice President American Optometric Association

Accredited teacher of Mechanotherapy and physical therapies by the Ohio State Medical Board

Past Dean Department of Mechanotherapy Metropolitan College

Dean of Central States College of Physiatics

Fellow of the American Academy of Optometry

Fellow College of Syntonic Optometry

Who is the author?

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The Book: "The Syntonic Principle-Its Relation to Health and Ocular Problems"

Pages: 204-206

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