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DIFFERENTIATING AUTO-INTOXICATION OF OPTOMETRIC SIGNIFICANCE

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In presenting this subject I realize there are those in Optometry who feel we should have nothing to do with the subject of auto-intoxication. However, when we add to auto-intoxication, of optometric significance, then I fail to see how anyone can wish to ignore it. Optometry certainly must be interested in auto-intoxication where it can be proven to affect the eyes of our patients.

Prior to the time Dr. Spitler gave us Syntonics it was a problem what to do with patients affected by intestinal auto-intoxication other than refer them to a physician, regardless of how definite the affection was regarding the visual apparatus.

Now we definitely have a means, in Syntonics, so we can give the patient relief. Before we can give relief, however, we must diagnose the condition. I hope to demonstrate to you a means by which we can differentiate constipation, complicated or uncomplicated, by digestive disturbances, jaundice and anemia. These theories we advance are based upon pathological conditions of the conjunctiva of the eye and we believe this method recognizes systemic infection due to auto-intoxication and improper diet much earlier than is otherwise possible. We find this method makes a certainty of diagnosis not existent in other forms. Perimetry, innervational reserves and so amplifying the diagnosis.

Auto-intoxication of optometric significance must be auto-intoxication that affects the visual apparatus.

The theories advanced today have been used in my practice for 15 years. Five years ago they were presented to the California Optometric Research Institute at its regular meeting at the California Institute of Technology in Pasadena. Since that time the members of that group have made use of it.

In all textbooks it has been our pleasure to review, it is stated that intestinal auto-intoxication probably is not a frequent cause of eye disease. Speaking in a narrow sense this is probably true, but during the 15 years of research and tabulation referred to, we have proven that digestive disturbances and faulty elimination do affect the eyes of a large percentage of those afflicted.

Text books refer to the severe cases or iritis, cyclitis, choroiditis, etc., while we refer to incipient conditions, which, if not corrected, may lead to these graver conditions.

The symptoms of constipation affecting the eyes may be any of a long list, but to review a few may be helpful. These are photophobia, blepharitis, with or without the deposits of mucous dried among the lashes, tired eyes, aching globes, low neuro-muscular tonicity, drowsiness, engorged veins of the fundus, early presbyopia, sluggish accommodation and retinitis, and last but not least, cataract. There are many others. We are of the opinion that a large percentage of cataracts can be traced to faulty elimination, also that many cases of so-called early macular degeneration are basically constipation cases. Cases which we treat in our practice of cataract in which we can demonstrate

constipation, we alternate Syntonic treatment for the cataract with that for the constipation on the 3-1 basis. So far it has been very successful.

Intestinal auto-intoxication is a condition in which some of the waste products are not properly excreted, but enter the blood stream.

We know that some parts of the eye are rich in blood, also that some of the blood vessels are end organs. Therefore, the purity of the blood supply is one with which we must concern ourselves if we are to conserve and give comfort to our patient's vision.

All cases of improper elimination do not manifest themselves in the conjunctiva, but remembering its blood supply we will readily realize the importance of the differential diagnosis when it does.

The conjunctiva of the upper lid and the lids also obtain its blood supply from two arterial arches, the arous tarseus superior and interior surface of the tarseus inferior. The arous tarseus inferior lies on the interior surface of the tarsus close to its border. To reach the conjunctiva its branches perforate the tarseus from before backwards above the free edge of the lid. The arous tarseus superior lies a little above the arous and passes through the fascia tarso-orbitalis to reach the conjunctiva.

The conjunctiva of the eyeball receives its blood supply chiefly from the vessels of the retrotarsal fold – the posterior conjunctiva vessels; also from the anterior ciliary vessels. These latter vessels coming from the four recti muscles running under the conjunctiva to a point near the cornea where they disappear, entirely, the eyeball through the sclera to supply the ciliary.

But, before this happens, they give off branches ending in the limbus as vascular loops, directly at the margin of the cornea. This is of great importance to the cornea since it is chiefly responsible for its nutrition. Branches of the ciliary – the anterior conjunctival vessels – run backwards in the conjunctiva toward the posterior conjunctival vessels anastomosing with them.

Reference has been made to the blood supply of the lid – the inferior and superior arous tarseus. The veins of the lids are even more numerous, dense plexus being formed in each retrotarsal fold. The veins of the lids in part empty into the veins of the forehead, into branches supplying the ophthalmic vein. The latter in order to reach the veins of the orbit pass through the orbicularis.

Direct connection between the blood supply of the ciliary muscles and the conjunctiva is also of importance. Two branches of the posterior ciliary arteries (the long branches) directly supply the ciliary forming the circulus arteriosus iridis major. The anterior ciliary vessels, as we have seen, entering the eyeball near the cornea also help to form the circulus arteriosus iridis major, and supply the ciliary and iris.

The blood supply of these parts arranged as it is, pathology of the conjunctiva certain must, therefore, lead to the same condition existing in the ciliary bodies, iris and ocular

muscles, and certainly must interfere with the proper nutrition to the cornea and crystalline lens.

These conditions of the conjunctiva, with the very probable involvement of the adjacent tissues supplied directly by the same arterial branches, are undoubtedly responsible for many cases of uncomfortable vision complained of by patients who have been made emmetropic and orthophoric.

Medical text books advise us that anemia may be recognized in the sclerotic. I find no mention of the conjunctiva. We are told jaundice may be recognized in the sclerotics when the disease has attained, and not before, an icterus index if 18. If you recall the normal icterus is from 4 to 6. Just recently we were able to recognize a case of hemolytic jaundice with constipation, in which the icterus was 9, and a differentiation that only a slight anemia was present, hemoglobin being 82, which is a low normal. This was a girl of 17 who had been under a physician and oculist's care for years. Her Rx was O.U. +.37C. Other than the straining present, eye findings were almost negative. She had recently been advised to discontinue school due to the almost constant ache in the eyes. After two months treatment the girl is now carrying on the usual school work.

"THE ORIGIN OF BILE PIGMENTS – The bile pigments come from the hemoglobin of disintegrated red cells. In health these broken-down red cells are taken up by the special endothelial cells which line the blood vessels and form the reticule-endothelial system. Most of these special endothelial cells occur in the blood vessels of the liver, spleen, and bone-marrow. In the liver the bile pigments are separated from blood plasma and with bile salts go down the biliary ducts as pure bile. The bacteria in the intestine act on part of the bile to form urobilinogen, which is absorbed through the intestinal wall into the portal circulation where it is converted by the liver into bilirubin and excreted into the bile ducts again. This is a quotation from Nicholson's book on Laboratory Chemistry, which I suggest everyone should own. The symptoms of excessive bile in the system affecting vision are tired aching eyes, occasionally smarting and photophobia. There frequently is a general malaise with or without occasional vomiting or nausea.

<u>Anemia</u> presents ocular symptoms of tiredness, smarting and gritty sensations, low neuro-muscular reserves, pale fundus and pale conjunctiva. Sincere there is a lack of hemoglobin or red corpuscles these are quite natural symptoms. As anemia is, in a large percentage of cases, and effect, not a cause, one should expect to find complications of symptoms.

A method of checking on the anemia found in the lids is to have the patient stand in a good light, with the arm held at the side, hand out at the level of the apex of the heart, and fingers flexed. Hold your own hand in the same position (providing you are not anemic) and compare the palms. In anemia the palm is pale. This is known as the palm test for anemia.

The typical characteristics of auto-intoxication affecting the palpebral conjunctiva are hyperemia of a deep, intense, diffuse and fairly uniform red and velvety congestion; it is thickened and cobblestone pavement-like, papillae are present, slightly more profuse towards the retrotarsal folds, present in the conjunctiva of the lower lids as well as that of the upper lids; calcareous of fatty deposits are present, also dried secretion in the form of granules among the lashes. Jaundice is recognized by the yellow staining. Anemia is recognized by the lack of normal coloring. This frequently the case in diagnoses as we seldom find a patient with all conditions present.

To those of you who may wish to use the method described, may I suggest that constant examinations of the conjunctiva are necessary so as to recognized the fine variations that occur.

For a number of years we have been able to diagnose intestinal auto-intoxication, jaundice and anemia from the examination of the conjunctiva. It is our opinion that 75 percent of cases of this type affecting vision may be diagnosed using this method.

We believe the early recognition of these chronic cases of auto-intoxication will do much toward the prevention of cataracts and in cases where cataracts are already forming, will arrest the development; also that there are cases diagnosed as degeneration of macular fibers in middle age patients, having reduced central vision, but no fundus changes visible with the ophthalmoscope, that are not at first true degenerative cases, but are eliminative toxemia.

We believe the recognition of these cases will solve many of the cases of photophobia, abnormal lid conditions, blurred vision, dizziness, drowsiness, etc.

In closing, one typical case of auto-intoxication may be of interest. A seamstress, age 35, complained of inability to sew but for a few minutes without her eyes smarting, watering and blurring. Photophobia was present. A month previously there had been prescribed for near use O.U. plus 1.00 S. which gave her no relief. Examination indicated the following: O.U. +.25, exophoria 2 for distance, with red glass test, exo 2 for close. Positive reserve fusion 12, reversal at 8, negative 15, reversal at 10. Fundus showed engorged veins, external examination typical characteristics of constipation, color fields gave blue contraction inside the red and partially inside the green. No glasses prescribed. Following definite hygiene, correcting the constipation, the symptoms were relieved and the patient has had no further trouble for five years.

Discussion of
AUTO-INTOXICATIOB OF OPTOMETRIC SIGNIFICANCE
By
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Every optometrist who does not confine himself only to the selling of spectacles and who is really trying to relieve discomfort originating in the visual apparatus and its appendages, cannot afford to ignore the theories advanced by Dr. Simpson in his paper on auto-intoxication of optometric significance, if he is to succeed in giving relief to those seeking his services.

Every optometrist owes it to his patients to ever broaden is knowledge of diagnosing causes of ocular discomfort, to acquaint himself with the most modern methods of eliminating these causes when possible, and thereby better enabling himself to care for his patient. However, it is up to the optometrist to keep himself informed as well of the limitation imposed upon him by the laws of his state governing Optometry.

We, as Syntonists, can benefit the most by studying the theories advanced by Dr. Simpson, his methods used for diagnosis from the various symptoms found in each case, and prescribing syntonically after correcting all refractive errors.

Personally, I have found Dr. Simpson's paper quite interesting to read (besides the education aspect of the paper) and his conclusions, arrived at by interpreting the various symptoms, seem logical to me.

It should leave with all serious-minded syntonists a conviction of the importance of a thorough ophthalmoscopic examination of the interior and exterior of the marvelous visual apparatus, the one and only pair of eyes we will ever have. It is also important to acquire good text books bearing on this subject and to constantly make use of them.

Everyone practicing Optometry for any length of time has had experience with cases where correcting the refractive errors alone failed to give comfort, and in many cases failed to improve vision. In cases where toxic interference was more or less evident, all the optometrist could do was to send such cases to his M.D.

However, regardless of whether the optometrist feels capable of clearing up the condition syntonically or otherwise – or whether he prefers to refer the case to a friendly M.D., it is self-evident that the purity of the blood supply must be the concern of the optometrist if we are to give visual comfort to those of our patients having some systemic infection which interferes with their visual apparatus.

Our main concern is to give the best and the most comfortable vision possible. It is our duty to watch for every symptom of interference and to do everything in our power to eliminate these. When we find a case that is not an optometric case, we should send it to the M.D. or to whomever we think it belongs.

Thanks to Dr. Spitler, we are able to give relief to many patients for whom we could do but very little before he gave us Syntonics.

Thanks to Dr. Simpson, we should be better able now to diagnose the cause of ocular discomforts in more cases where auto-intoxication is a contributing factor, if not the main factor.