Reprint

on

BLINDSPOT RESTRICTIONS

ARTICLE II

by
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Cooperation with medicine and dentistry is vital to the successful conclusion of blindspot cases

Blindspot Restrictions II

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(Continued from the January 7, 1954 issue of THE OPTOMETRIC WEEKLY*)*

We optometrists are non-medical and should never allow ourselves to be placed in a position where our honest intentions could be remotely misconstrued as attempting to treat disease. However, it has always been and always will be our obligation as guardians of vision to be constantly alert for the very first signs or symptoms of any pathological condition that would eventually be disastrous to the patient's health or vision. Furthermore, I believe we should avail ourselves of information so that we can wisely refer such patients directly to the proper practitioner for expediency of treatment and economy. Remember your obligation to your patient. He depends on your judgment when you refer him to the other professions of the healing arts.

This case report is important at this time because of an erroneous diagnosis by the first practitioner and I feel this information should be available to everyone, especially to the men just beginning to use Dr. Ingwald O. Davidsen's technique in apprehending drainage type infections above the shoulders, through the optometric procedure of charting the (Mariotte's) blind spot of the eye and the subsequent interpretation for referral.

Had I not had the rich experience of personal instruction from Dr. I. O. Davidsen, Laguna Beach, California, which I deem most important, plus the guiding hand of Providence which through other patients brought me in contact with a certain oral surgeon, I would have "muffed" this case, and blamed failure either on an unknown cause, or even questioned the accuracy of the blindspot technique itself. This case report could have been included in my original article, published January 7, 1954, but I wanted more time to elapse so as to permit any adverse reaction to occur before I could definitely state that the patient was benefited.

My first contact with the following patient was in the office of Dr. Charles M. Wells, an optometrist friend with whom I was visiting in West Virginia. We had prearranged a fishing trip to Canada to start the following day. My friend had received his caecanometer just a few days previously, and enlisted my assistance to aid him in this new diagnostic technique because of the urgency of time for this particular patient.

Date:
September 9, 1953

Patient:
Mr. J., age 58

Occupation:
Storekeeper and assistant postmaster

History:

Mr. J. was informed by three different ophthalmologists at different times that his vision was being impaired by a macular degeneration called retinitis pigmentosa or choroiditis, and that unless the source of infection causing the destruction of his vision could be discovered and eliminated, there could be no hope of saving his vision. Mr. J. said he was under the care of these good men from 1949 to 1953. They had admitted failure in their search for the foci of infection. Also, three optometrists were consulted in his desperate efforts to save his vision, and their diagnoses were the same.

No headaches.

Occasional pains in left shoulder and down the back.

Figures or forms at distances were blurred.

V. A. with Rx —OD—20/200
OS —20/40

V. A. without Rx—OD—20/200
OS —20/50

Blindspot Charting —OD—72% Restriction. (10 mm. x 11 mm.)
OS— 4% Restriction. (19 mm. x 24 mm.)

Subjective Examination of the Fundii:

An active retinitis pigmentosa was easily observed in the paramacula field of both eyes. Much more advanced in the right eye and close to the macula of the right eye.

Again may I call your attention to the severe blindspot restriction of both eyes (OD—72%, OS—4%). The right eye with the more advanced destruction also has the greater restriction.

Previous experiences have proven many times in a majority of *severe restriction* cases where a big difference of restriction in the two eyes existed, the source of infection when found and eliminated would invariably be of an oral involvement and usually in the upper jaw.

For the benefit of certain skeptics which are in the minority of all branches of the healing arts, I wish to quote Duke-Elder's 5th Edition, page 5423:

"Dental Infection: Infection may travel from the teeth to the orbit in one of four ways, the first three of which can be demonstrated but the fourth is merely inferred, particularly from cases where a dental abscess on one side is associated with an orbital cellulitis on the other.

"1st. By direct spread as a subperiosteal abscess up the anterior surface of the maxilla.

"2nd. By infecting the maxilliary antrum where an empyema is caused which in turn spreads to the orbit.

"3rd. By causing an infective thrombophlebitis which spreads by the pterygoid venous plexus into the orbit.

"4th. By metastatic spread, the dental infection acting as a *focus of infection* causing a *bacteraemia.*"

Also, please read the last paragraph on page 5655 and all pages 5682 to and including 5686.

I advised Mr. J. to consult the best dentist or oral surgeon in his vicinity and tell him the reason and purpose of his visit and consultation, requesting X-rays, vitality tests both electrical and thermal, and a thorough oral examination. He was also to tell the dentist or oral surgeon the character of blindspot charts indicated a suspicion that some nonvital teeth might be discovered which I thought would be an indication of some form of bacterial invasion not easily manifested by X-rays.

I also expressed my opinion to Mr. J. that if as many as two dead teeth were discovered, it could be remotely possible that the same source of infection causing the teeth to be

non-vital could also be the same infection causing the retinitis pigmentosa. If such an infection was found and removed, the blindspot chartings would be positive proof of removal if the blindspot chartings reverted back to normal after the operation. When and if the blindspot chartings reverted back to normal, there would not be a foci of infection above the shoulders. Consequently, if no foci of infection existed it would be reasonable to expect no further destruction to his vision, in lieu of the fact that spinals and all blood tests previously taken had ruled out syphilis.

When I returned to Kansas City from my fishing trip, a copy of the oral surgeon's report on Mr. J.'s mouth was in my office, as follows:

Name—
Mr. "J."

Address—
W. Va.

Age—
58

Occupation—
Assistant postmaster and storekeeper

History—
Patient requests complete dental examination and diagnosis. Direct complaints concerning teeth, none.

Examination—

Clinical—

Soft Tissue—
Normal and healthy

Teeth—
Well cared for, slight anterior occlusal abrasion, upper right central and left cuspid missing but replaced by bridges, (fixed). Upper right second molar and third molar missing, also upper left third molar and lower left second molar missing.

Vitality—

Electrically—

Thermal—
All remaining teeth vital except upper left second molar and lower left first molar.

X-Ray—

Teeth—
Negative and as above described.

Bone—
Negative.

Diagnosis—
There is no positive evidence of dental infection in this mouth. The two non-vital teeth are subject to question even in the absence of root end bone destruction. This office makes no effort to diagnose a maxillary sinus but notes that the right maxillary sinus appears cloudy on the dental x-ray. It is suggested that a thorough examination be made of the accessory sinuses before deciding definitely to remove the two teeth under question.

Dr. B., oral surgeon.

Regardless of my limited knowledge of dentistry, I was not convinced of the efficiency or accuracy of the diagnosis in the above report of Dr. B. A loss of time in bickering meant a more permanent loss of vision to the patient.

For the benefit of the readers not having the 5th edition of Duke-Elder, I will quote part of a paragraph on page 5685:

"It is probable, therefore, that systemic infection from the teeth which ordinarily is a common and minor event occurring intermittently in apparently healthy persons without mishap, assumes virulent potentialities by the establishment of an allergic state in the eye developed after repeated exposures to it, the primary aetiological factor being in reality the state of sensitization of the ocular tissues rather than the virlulence of causation origin. It is probable that the majority of ocular lesions of an inflammatory nature occurring in the eye of dental origin—conjunctivitis, keratitis, uveitis and perhaps optic neuritis is of this nature and for this reason it is to be anticipated that *teeth with the average dentist with a local outlook would pass as innocuous would in these circumstances be capable of harm.*"

I know the fact that there are many good dentists and oral surgeons in our country capable of correctly diagnosing Mr. J.'s oral condition; and one of these capable men should be visited as a "double check" on Dr. B.'s diagnosis. However, I realized with a chill what would eventually happen if Mr. J. had the misfortune of consulting another dentist with a local outlook as described in the above quotation of Duke-Elder's.

I advised Mr. J. through my colleague, Dr. Wells, to make arrangements to come to Kansas City for another examination and diagnosis by an oral surgeon who had done so much good for another patient with a similar problem.

Mr. J. evidently was more interested in saving his eyesight than his two nonvital teeth because he arrived in Kansas City 10/22/53 and was at my office at 11:00 a.m.

V. A. with Rx —OD—20/200
OS —20/50

V. A. without Rx—OD—20/200
OS —20/80

B/S Chart —OD—46% Restriction
(14½ mm. x 16 mm.)
OS —12% Restriction
(18 mm. x 22 mm.)

Mr. J. was then sent to Dr. "C." oral surgeon, for a second examination and diagnosis.

3:00 p.m., 10/22/53—Dr. C. telephoned his report and mailed a copy of his diagnosis to my office for the record:

"Report of Mr. J. of West Virginia for Dr. Wells, Grafton, W. Va.

"Clinically, I found: In the upper left posterior region there were two molars and two bicuspids. The cuspid is missing, reported extracted in early youth. There is a full crown, gold, with a space retainer on it, on the left first biscuspid. There are synthetic porcelain fillings on the mesial and distal of the left lateral incisor, left central incisor, and right central incisor. The right lateral incisor is missing. There is a generally advanced abraded condition exisiting in the entire mouth. The entire occlusion is on the anterior portion of the mouth. In the upper right posterior of Mr. J.'s mouth are two bicuspids and a first molar. It was obvious that Mr. J. had advanced resorption of the alveolar process as well as a poor gingival crevice condition existing around all the maxillary teeth, with pyorrhea pockets present in all the posterior teeth plus elongation of the teeth not in contact. These teeth were checked for vitality by use first of ice and when the patient failed to respond in a single instance to the contact of the tooth with ice, he was then checked by a direct spray of ethyl chloride after isolating each tooth with gauze and plastic strips. The patient reported that he experienced no difference in sensation on either the contact with ice or ethyl chloride. In one or two instances the patient thought he felt a difference in sensation to percussion of the individual teeth. This constituted clinical examination of the maxillary teeth. The root dorsum, and lateral surfaces of the tongue as well as the pharynx, the hypopharynx, and the naso-pharynx and buccal mucosa of the mouth were examined for the possibilities of neoplasm. Nothing was found. This concluded the examination clinically for the maxilla and our attention was then transferred to the mandible.

"In the mandible on the left posterior side was evidence of a not too recent extraction. The area was still sensitive to finger pressure. The anterior teeth on Mr. J. had previously been checked with ice and reported to be in good condition. These teeth were not checked by ice, they were checked by direct spray of ethyl chloride, the patient failed to report any sensation despite the fact that the ethyl chloride was continued until all anterior teeth were covered with a coating of ice. Thus indicating the anterior teeth to be non-vital. Posterior teeth in this case in the mandible were missing. A recommendation for total extraction of teeth followed by a double alveolectomy was made.

Sincerely yours, Dr. C., DDS."

Now read and compare the two dental reports again. It is almost unbelievable that these two diagnoses made within thirty days could be so different. Here is a patient aware of his vision failing steadily and one diagnosis questions the removal of two teeth before a thorough examination of the accessory sinus. The other diagnosis calls for *all* remaining teeth to be removed immediately and a double alveolectomy (Dr. Shearer type) to be done.

Mr. J.'s reaction was like a drowning man grabbing at a straw. The oral surgeon, Dr. C. could not promise nor could any one promise Mr. J. that his vision could be partially saved by having the alveolectomy performed but there was just a chance it could be. The patient was in favor of doing anything to save his vision and readily agreed to an alveolectomy to be performed the following day.

10/23/53—Double alveolectomy performed by Dr. C.

10/28/53—Mr. J. was released from the hospital and reported in the office the following morning.

10/29/53—10:15 a.m.:

V. A. with Rx	—OD—20/200 OS—20/25
V. A. without Rx	—OD—20/200 OS—20/70
B/S Charting*	—OD norm. (19 mm. x 26 mm.) OS norm. (20½ mm. x 28 mm.) Taken six days after the alveolectomy.

Mr. J. was cognizant of the fact that the vision of his left eye started to improve before he was dismissed from the hospital 10/28/53. His right eye was slow to respond, naturally, since the ravages of retinitis pigmentosa had left its permanent damage; however, some improvement has been reported recently.

Mr. J. is a very grateful and happy man today. He reports his health is much improved and he has gained considerable weight, and is working every day at his store. I had refused remuneration for my services until Mr. J. was absolutely certain that his visual status was permanent. I did not consider his judgment but I requested him to go back to the ophthalomoligst who had last treated him. Mr. J. did just that on 2/10/54. That doctor was quoted as saying, "I am rather surprised to find your eyes in this condition. Before, whenever I looked I found evidence of old and new hemmorages. Now, I can find neither. Your condition is improved and stationary."

The next day Mr. J. sent me a signed blank check with instructions to fill in any amount for my services and rest assured that he would be happy about it. I should have kept the check and framed it with his letter of appreciation to show what really can be done with the caecanometer and intelligent cooperation with dentistry and the other allied professions.

May 22, 1954, I learned from Dr. Wells in West Virginia that the V. A. of the right eye had improved to 20/100. The left eye was 20/20 plus. When viewing the permanent damage of the fundus of the right eye with the ophthalmoscope, you marvel at Mr. J.'s ability to see as well as he does with the right eye.

Now! I am wondering how many more "Mr. J.'s" are losing their eyesight under similar circumstances. You or your ophthalmologist friend can and do refer such patients for a thorough oral examination and are compelled to accept a negative report, in lieu of the fact that you at that time had no other means of proof to doubt the accuracy of a negative finding, even though the report was seemingly verified by the X-ray.

How this oral surgeon, Dr. C., can find evidence of infection where others have failed is beyond the ability of this optometrist to attempt to adequately explain. However, I do know his training and technique differ with other schools of thought in dentistry, and that he strictly follows the procedure and technique taught by Dr. W. L. Shearer, M.D., D.D.S., of Omaha, Nebraska.

To give you some idea of Dr. Shearer's reasoning, I would like to quote three paragraphs from his reprint, January, 1950, Issue of The Chronicle of the Omaha District Dental Society on "History of Alveolectomy and Partial Alveolectomy and Management of Pathological Condition of the Jaws:"

"One of two things occurs when simple extractions of teeth are made. Either the alveolar process is gradually resorbed and a knife ridge is formed, osteosclerotic in character, so sharp that it would cut the ungloved finger if it were passed over it with a little pressure; or, if the resorption of the alveolar process does not occur and the cortical tissue of bone is slightly hard, thus precluding the possibility of normal absorption taking place, recomposition of the cells of the alveolar process takes place and remains in the body of the jaws forever as a low-grade infection.

"Right at this point let met state that there is never a layer of periosteal cells over the cortical tissue of bone in either the upper or the lower jaw, if absorption has begun, until every vestige of the alveolar process has been absorbed. This alveolar process is a transitory tissue. If teeth never developed in the mouth, alveolar process would never develop. At birth there isn't any. It develops as the teeth develop and it fades away in whole or in part, in all instances, to a greater or less degree as the teeth are lost. As I stated above, what is left is an osteosclerotic bone, very sharp, most likely predominating in the lower jaw, but true in the upper jaw as well.

"We hear a lot of controversy about the term 'dead tooth.' By this term I mean a tooth that has lost its pulp. It then becomes a foreign body which nature is doing her best to exofoliate from the alveolar arch. Atrophy of the pericemental membrane takes place immediately when the tooth loses the life of the pulp. On the other hand, if nature succeeds in exfoliating, a great destruction of the tissue takes place. We then may have a hyperplastic pericemental membrane. In this connection a hyperplastic membrane is always pyogenic.

*Note: The size in mm. is placed after (norm) for your future observation in your own office, because of my observation in other cases. When the source of infection has been definitely removed the blindspots will chart slightly larger than the minimum effected norm. of 17 mm. x 25 mm. and then return gradually to approximately 18 mm. x 26 mm. or 17 mm. x 25 mm. and remain at that size.

"Again referring to what happens to the pericemental membrane after the pulp is lost and atrophy of the pericemental membrane takes place, it is a pathological tissue and cannot be considered anything other than pathological.

"We, as a profession, have missed a great opportunity to serve our people and to protect their health as we should. This is true today. If we would all work together honestly and sincerely year after year, we would gain a common knowledge, and our people would be better off. If we are going to protect the health of our people, we must remove all infections in the jaws and do it thoroughly. If we do not, these organisms of the different kinds pass through the lymph and blood streams and may locate in any part of the body and produce a complication of the kidney, the heart, the joints, the skin, the gastro-intestinal tract, the eyes, the sinuses or any other part of the body. To illustrate how rapidly organisms pass through the circulation, a dye placed in the maxillary sinus is seen in the sclera of the eye in four minutes and in the pulps of the teeth in eleven minutes."

To this date, I can unhesitatingly make the following statement: I have never made a caecanometer charting on a patient with an *active retinitis pigmentosa* that *did not* show a *definite restriction* in the (Mariotte's) Blind spot.

To this date I have had the opportunity to chart the blindspot fields of three other patients with an active retinitis pigmentosa previously diagnosed by some very good and reputable ophthalmologists in different parts of the United States. Each patient had consulted several ophthalmologists for treatment. Each time unsuccessful attempts were made to locate the foci of infection responsible for the active retinitis pigmentosa.

All four of these active retinitis pigmentosa patients when charted on the caecanometer, showed a definite restriction of the (Mariotte's) blind spot.

Syphilis had been definitely ruled out as the causative factor by the medical practitioners in all four cases.

All four patients were examined by Dr. "C.", oral surgeon, for dental infection and non-vital teeth, and all four were reported as having a definite oral envolvement, including one case (edentulous eleven years).

All four patients had been examined by other dentists and oral surgeons at the requests of ophthalmologists and optometrists previously consulted, and were reported negative after some minor corrective work.

All four patients followed the oral surgeon, Dr. C.'s advice and had a double alveolectomy (Dr. W. L. Shearer type) performed.

All four patients were given a caecanometer blindspot charting the day of their dismissal from the hospital, which was after an average recuperation period of about six days following the alveolectomy, and all four patients' blindspot fields were slightly larger than minimum normal size (about 18 mm. x 26 mm.), and these fields have consistently remained that size over periods ranging from six months to two and a half years.

All four patients voluntarily reported a noticeable improvement in their vision even before being dismissed from the hospital.

It is quite obvious that 20/20 vision OD, OS, and OU can't possibly be regained in certain cases of long duration, especially when the para-macula field has been permanently damaged. But the visual acuity of three of these patients has continued to improve over a period of time to such an extent that they were able to return to their previous normal living habits and working conditions enjoyed before the loss of vision began.

The fourth and last patient was dismissed last week from the hospital. The alveolectomy was performed six days previously. His vision was improved in right eye from 20/200 to 20/80, left eye from 20/100 to 20/70. The caecanometer findings verified the elimination of the foci of infection because the blindspot fields reverted back to full normal (18 mm. x 26 mm.) size. However, much more time will have to elapse before we can be sure of his permanent visual acuity.

The joy and appreciation expressed by these grateful patients far exceeds any monetary value that could be placed on material things or services, and I do hope this article will be of some help to all good practitioners in optometry, ophthalmology, and dentistry so that in the near future similar patients may receive proper help in time to avoid unneccessary permanent damage to their vision.

Comments

There is one pertinent fact that should have been brought out before, i.e., in preparing a paper one cannot present in painstaking detail the many different problems incurred with each patient. Caecanometry should be taught by actual demonstration with patients. I was extremely fortunate to receive my training from "the maestro" himself, Dr. Ingwald O. Davidsen, and I sincerely hope that in the near future his health will permit his being available to interested groups and societies. I can assure you that one good session with the man who developed this technique will be invaluable to you and your practice.

Without Dr. Davidsen's blind spot technique I had no definite proof of a focus of infection, which would aid me in referring these patients to the proper practitioner.

Also, I have been fortunate in finding an oral surgeon (student of Dr. W. L. Shearer) using the kind of technique making possible the detection and elimination of oral infections, confirmed by the caecanometer, but missed by other dental practitioners.

The events leading up to the coordination of results produced by these two wonderful men in their research in different fields gives me a sincere feeling that Divine guidance brought this combination of techniques together.

601 Waldheim Bldg.

References:

Duke-Elder, 5th Edition, pp. 5423, 5655, 5682 to 5686, 5685.

W. L. Shearer, M.D., D.D.S., Reprint, January, 1950, Issue of The Chronicle of the Omaha District Dental Society on "History of Alveolectomy and Parital Alveolectomy and Management of Pathological Condition of the Jaws."