

quent use of a boric acid collyrium and the applications of a mild antiseptic ointment to the lid margins serves the double purpose of treatment of the conjunctivitis present and the prevention of more serious complications, especially those affecting the cornea.

For the iritis, the usual treatment with atropin, dionin and hot applications generally suffices. For the more severe corneal lesions, as the keratitis and actual ulcers, the same treatment with the additional use of trichloroacetic acid to the ulcerated areas. In cases where there is a necrotic slough which does not detach itself readily, it should be removed by gentle curettage. The continued use of dionin and yellow oxid of mercury ointment, over a considerable period of time, does much to aid the absorption of the corneal scars or infiltration.

PARALYSIS OF CONVERGENCE. REPORT OF CASES.

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The following cases are reported, not because of the rarity of the condition, but because it is easy to overlook such conditions.

Of the following cases, one of the patients had been treated at several hospitals and states that at one hospital the doctor advised operation on his eye muscles. Any one who is familiar with ocular muscles can readily appreciate how the busy doctor may slip up on his diagnosis. Too much emphasis cannot be laid upon the importance of the Wasserman test as an aid in diagnosing pathologic ocular deviations whether the condition is due to an individual muscle paralysis or not. To me it is equally as important as proper refraction of all muscle cases. The fact, that two of the three cases reported have positive Wassermann reactions, prompt one to ask the questions: 1. Whether or not we are dealing with a lesion of syphilis, the manifest symptoms of which are a paralysis of convergence; 2. If such is a com-

mon symptom found in syphilis and is being overlooked; 3. Is it an early or late manifestation of syphilis; 4. Where is the center of convergence?

Several of my colleagues have been consulted and all maintain that the center of convergence is in close proximity to the center of divergence, which is located near Deiter's nucleus in the medulla oblongata. I shall not attempt to go into the differential diagnosis of this condition but will say that before making the diagnosis of paralysis convergence, it is necessary to differentiate between: 1. Convergence insufficiency; 2. Paralysis of the individual muscles (internal recti); and 3. Divergence excess.

CASE 1. E. L. H. Age 41. Colored. Male. Admitted to Out-Patient Clinic on March 30, 1921, on complaint of double vision. Past history, rheumatism three years ago. Venereal disease denied. Present trouble started three years ago following an attack of rheumatism. Patient began to see double at that time and this condition has constantly grown worse.

Examination reveals vision R. 20/100; L. 20/70 corrected to R. 20/20 with a plus 50 sphere, plus 75 cylinder axis vertical; L. 20/20 with a plus 70 sphere, plus 50 cylinder axis vertical. Fundus and media clear. Pupils react to light and accommodation. Near point of accommodation 22½ cm. o.u. Examination of extraocular muscles shows associated movements normal in all fields. No individual muscle paralysis. There is exotropia of 14 degrees for near,—1½ degrees of exotropia for distance. Tangent screens shows crossed diplopia in the primary field, not increasing in any other field. Patient unable to converge to the slightest degree. Neurologic examination negative, except some suspicion of inequality of knee jerks. X-ray of skull and paranasal sinuses negative. Blood Wassermann positive. Diagnosis, paralysis of convergence.

CASE 2. H. A. J. Age 22. Colored. Male. Admitted to Out-Patient Department on April 8th, 1921. Complaint, patient constantly annoyed with

double vision. Family history negative. Past history negative. Venereal disease denied. Present trouble dates back seven years, when patient suddenly noticed that everything he looked at appeared to be double. Condition has progressed very slowly.

Examination reveals 20/20 o.u. vision. Media and fundi normal and clear. Pupils react to light and accommodation. Near point of accommodation o.u. 12 cm. Near point of convergence 225 cm. Examination of extraocular muscles shows $7\frac{1}{2}$ degrees of exotropia for near; orthophoria for distance. Associated movements in six cardinal positions all normal. No individual muscle paralysis. Tangent screen shows crossed diplopia in the primary field, remaining the same in all other fields. Neurologic examination reports negative except some inequality in knee jerks. X-ray of skull fails to reveal any pathology in paranasal sinuses. Blood Wassermann positive. Diagnosis, paralysis of convergence.

CASE 3. J. E. D. Age 42. White. Male. Admitted to Out-Patient Department for examination on April 7th, 1921. Patient complained of double vision. Family history negative. Past history of no consequence. Venereal disease denied. Present trouble started three months ago when patient suddenly began to see double.

Examination reveals the findings as follows: Vision 20/20 o.u. Fundi and media clear. Pupils react to light and accommodation. Patient accepts a plus 1.25 sphere before each eye for near work. Near point of accommodation 29 cm. Near point of convergence 150 cm. There is an exotropia of $7\frac{1}{2}$ degrees for near; orthophoria for distance. Associated movements in six cardinal positions normal. No individual muscle paralysis. Tangent screen shows crossed diplopia in primary field, remaining the same in all other fields. X-ray of skull and paranasal sinuses negative. Blood Wassermann negative. Diagnosis: Paralysis of convergence.