This is, indeed, a preliminary report, which I shall make more complete in the future.

Under the head of general paralysis I feel convinced that too many diseases have been included, and within the next ten years we shall have differentiated and classified these various forms into several distinct diseases.

19 West Fifty-second Street.

ABSTRACT OF DISCUSSION

DR. CHARLES K. MILLS, Philadelphia: Dr. Fisher's statistics show the occurrence of optic atrophy in a considerable percentage of his cases of general paresis—about 40 in 800 or 1,000, and certain other low percentages. The occurrence of optic atrophy in *tabes dorsalis* is perhaps not more than 4 or 5 per cent. I have seen cases of optic atrophy in general paresis; they are reported by good observers and the other ocular phenomena of *tabes* have been of course extensively reported as occurring in paresis. Bevan Lewis, if I recall aright, has very elaborate records of all sorts of ophthalmic and ocular affections occurring in general paresis analogous to or identical with those occurring in *tabes*. I still feel like holding to the view that fundamentally general paresis and *tabes* are the same disease, and in saying this one needs not to say that *tabes* in regular form shall occur before the appearance of the paresis, or the reverse.

DR. C. B. BURR, Flint, Michigan: I have in my care a patient with parietic dementia with complete blindness for two years. The disease has run the ordinary course, extravagant delusions, motor symptoms, etc. Owing to focal symptoms present before the patient came under my care, suspicions of tumor or local lesion in the motor tract arose; but an operation brought to light nothing at all; and the case has been regarded since as a properly diagnosed one of parietic dementia.

DR. GEORGE A. MOLEEN, Denver: I saw a number of cases of optic atrophy sent to the hospital and I asked Dr. Jackson if he could regard them as primary optic atrophy; he said they were often followed by symptoms of paresis even after a period as long as twenty years. One of these cases I was able to follow for some time. The patient showed nothing when sent down but the atrophy of the tabetic type. Four or five months later he had a typical epileptiform attack followed by an attack of mental disorder in which he had to be restrained; and a year following he had a typical apoplectic attack and is now confined, probably permanently. I came to the conclusion that a good many of those patients with so-called primary optic atrophy ought to be watched rather carefully to see if this atrophy was not the first indication of a paresis.

DR. E. D. FISHER, New York: What has been stated by Dr. Mills is the generally accepted view. I have purposely put this in an extreme way. There are so many contradictory statements by different writers in regard to the condition of the eyes, as to the percentage of optic atrophy in *tabes* and general paralysis, that the subject is well worthy of reconsideration. In my private practice and in talking with others I find their experience coincides with mine, that ocular symptoms are comparatively rare in general paresis as compared with those which we find in *tabes*. Dr. Nonne states that the serodiagnosis gives quite a different report in *tabes* from that found in general paresis. Possibly that furnishes an additional proof that the two diseases are not one and the same.

Philadelphia's Public Playgrounds.—Philadelphia has an excellent system of public playgrounds, which is put into execution during the summer months. The schoolyards of the city are thrown open to the youngsters of the neighborhoods, swings, slides, games and all sorts of entertainment are provided for the little ones, and there are teachers and caretakers on hand to see that the fun proceeds along proper lines. There is even some slight attempt made at instruction, though nothing onerous is imposed on the little brains. The teacher reads stories that divert and instruct at the same time. The system has been found to be of such benefit that it will be extended along large lines.—*Hygiene and Physical Education.*

EPIBULBAR LEUCOSARCOMA

EXENTERATION OF ORBIT. NO RECURRENCE AT ORIGINAL SITE. DEATH IN THREE MONTHS FROM METASTASES*

CASEY A. WOOD, M.D.

CHICAGO

New growths on the eyeball, whether malignant or other, are so rare that a detailed history of an example of them seems worth while. I have been able to follow the course of a neoplasm of this kind almost from its beginning to its termination, and I take the liberty of reporting it.

Patient.—Miss J. O., aged 15, was referred to me Sept. 9, 1908, by Dr. F. W. Kettlestrings and Dr. H. S. Warren of Chicago, on account of a swelling of the right eyeball.

History.—She had had no trouble with her eyes except a slight discharge from them when a few days old, but this infection had lasted only a short time and had left no trace. From that time there was nothing particularly noticeable about her eyes until May, 1908, when the right lid became swollen. This was followed by an extension of the swelling to the eyebrow, after which it was noticed that the upper lid began to droop. Four weeks later the condition became decidedly worse and was shortly followed by pain in the eyeball itself. At that time she also noticed that any attempt to use the eye longer than half an hour—as in reading or studying—was followed by decided fatigue. Dr. Warren reported that the general health had been only fair, although the blood and urine, as well as the internal organs, were practically normal. She had been taking a simple iron and strychnia tonic. Her family history is negative so far as the occurrence of tumors is concerned and the patient has had none but the usual (infantile) complaints.

Examination.—On examination of her nose by Dr. Frank Brawley the patient gave a history of a yellowish-green discharge from the left nostril, but this had stopped before the eye trouble set in. She showed normal nares except a left posterior hypertrophy of the inferior turbinal. Coming to a nearer examination of the eyes vision of the left eye was normal; the patient read 6/5 minus and Jaeger 1, with good range. The sight of the left eye was 6/9 minus; Jaeger 1, not so well as on the right side. The fundi in both eyes were entirely normal. There was an apparent protrusion of the right eye. On raising the upper lid, which was distinctly swollen and covered about one-half the pupil, there was exposed a large, tense, semitransparent swelling which involved about one-half of the upper aspect of the globe. On digital examination, the tumor gave an elastic sensation and showed that it was in all probability confined to the superior bulbar surface and did not extend posteriorly. It was slightly tender to the touch, but the conjunctiva covering it was entirely smooth and non-adherent to the growth beneath. There was no true proptosis, although the globe and lids seemed more prominent than on the opposite side. The excursions of the eyeball were as extensive in the affected eye as in the normal eye. There was no evidence of changes in the cornea or in the sclerotic or overlying conjunctiva for 5 mm. around the sclero-corneal junction, and on using the ophthalmoscope there seemed to be, so far as it was possible to see, no involvement of the anterior segment of the internal eye. The new growth was apparently quite circumscribed, attached to the sclerotic but did not to any appreciable degree involve any portion of the conjunctiva. The right preauricular gland was rather hard, well-defined and slightly prominent. The corresponding submaxillary and anterior cervical glands were more easily outlined on the right side than on the left.

Roentgen Examination.—An x-ray picture of the orbital contents and neighboring cavities showed that there was no bone enlargement and probably no extension of the tumor mass be-

* Read in the Section on Ophthalmology of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

hind the eyeball; indeed, the ocular swelling seemed during the whole time of observation to be confined to the upper half of the globe and to diminish in volume below the equator. A number of further observations were made of the neoplasm. Dr. Reichmann made several skiagrams and believed that the *x*-rays indicated an orbit on the right side free of skiagram shadows than the left orbit.

Diagnosis.—The Calmette test gave a negative result in the opposite eye. That the patient might have the further benefit of any doubt, very large doses of iodid of potassium were given, in conjunction with pilocarpin sweats, for two weeks, with but slight benefit, except perhaps some reduction in the prominence of the preauricular gland. Under these circumstances and since the tumor showed a smooth surface, appeared to be circumscribed, was of elastic consistency, whitish in color and was associated with a preauricular enlargement, a diagnosis was made of probable subconjunctival leucosarcoma arising from the tissues about the superior rectus insertion.

Microscopic Examination.—To settle the question, under a general anesthetic a section of the tumor was removed on Oct. 1, 1908, and examined by Dr. Dagg of the Chicago Laboratory. His report is as follows:

"The tissue has the appearance of a small round-celled sarcoma. There are no well-formed vessels. One margin of the section shows diapedesis of red cells into the tumor mass. Mitosis of the cells not noticed."

The wound of operation healed kindly in a few days.

Although the right preauricular gland seemed to be less swollen after the treatment just outlined the group of glands at the angle of the jaw shortly became more prominent. In consultation with Dr. A. E. Halstead and after considering the *pros and cons* of the case, it was decided to do a combined exenteration of the orbit, with removal of the enlarged preauricular, submaxillary and cervical glands; in fact, of all the glandular tissue that seemed to be affected by the disease. On October 8, with the assistance of Dr. Halstead, this operation was successfully carried out.

Postoperative History.—On October 20 the skin incision involved in the removal of the extraocular glands had closed nicely and the patient did not complain of pain either in it or in the exenterated orbit.

Oct. 29, 1908: The patient left the hospital for her home. For some weeks after the orbital exenteration the Roentgen rays were used, as a remedial measure, within the orbital walls.

Dec. 29, 1908: The patient was able to go out of doors and was apparently doing well. The orbital wound showed no recurrent deposits and the external wound of operation had entirely healed.

Pathologic Report on Tumor.—From the pathologic department of St. Luke's Hospital I obtained the following report on the removed preauricular and submaxillary glands:

"The mucous glands from both sides show infiltrations of round cells about the ducts, corresponding to the small round cells of the primary tumor of the orbit, and are, therefore, to be regarded as metastatic small round-cell sarcomata."

I am indebted to Dr. Francis Lane for a report on the orbital mass which, of course, includes the eyeball, most of the conjunctiva and other tissues of the orbit.

Gross Findings: Right eye; bulb collapsed with furrow horizontally across the cornea (globe injected with formalin 4 per cent.); mass of orbital fat surrounds a 9 mm. long optic nerve and extends forward to superior rectus; superior rectus severed 26 mm. back of corneal margin with cut surface, oval, 7x14 mm.; circular cut of conjunctiva varying from 9 to 11 mm. from limbus; upper inner quadrant of conjunctiva brownish color, wrinkled and folded, apparently much thickened and immovable over underlying sclera; bordering upper one-half of cornea the conjunctiva *bombé*-like and slightly overlaps superior quadrant of corneal margin; an irregularly shaped central defect of corneal epithelium. Deep in cornea are number of zigzag, for most part horizontally directed, narrow striæ [posterior to horizontal corneal groove and due to collapse (?)]; superficial, uniform, moderate corneal haze somewhat obscures an apparently normal anterior chamber and anterior iris surface; pupil round, 3.5 mm. diameter; lens opaque [postmortem (?)].

"Coronal Section: Anterior segment—sclera thinned; upper one-third of cut surface shows sclera covered with a closely adherent 0.5 mm. thick, firm, pinkish layer, from which capsule and conjunctiva can be easily stripped, leaving behind very delicate strands of connective tissue [Tenon's space (?)]. Lens yellowish-white and slightly translucent with transmitted light. Vitreous streaked and filled with innumerable very fine highly refractile particles (not crystals, but globules as shown under microscope). Posterior segment: retina very white color, cloudy vitreous hides details of disc head; inner lower half of sheaths of optic nerve thickened to 3 mm. and movable over nerve trunk.

"Anatomical Diagnosis: A small, round-celled sarcoma. The tumor cells always appear to surround the blood vessel walls or to lie in the perivascular lymph spaces and are never found within the lumen of the blood vessels themselves."

Remarks.—The last time I saw the patient she seemed very well. It was evident there was no recurrence of the neoplasm either in the orbit or in the neck or lower jaw. However, in March, 1909, the family physician reported to me that although she had had several attacks of *malaise* of apparently trivial import, she was quite well until the end of January when, after some obscure symptoms referable to her abdomen, she died rather suddenly of what Dr. Warren believes to be an abdominal metastasis, without the slightest appearance of the tumor in its original locality. No autopsy.

Anyone examining the bibliography of epibulbar tumors will find that, although the sarcomata are probably the commonest of the malignant forms, they are not so common as one might at first imagine. LaGrange¹ gives full references to all of these new growths described to the year 1900.

72 Madison Street.

ABSTRACT OF DISCUSSION

DR. MELVILLE BLACK, Denver: I have never had a case of epibulbar sarcoma of the eye; therefore, I do not feel qualified to speak of this case from personal experience. Dr. Wood is to be congratulated on having acted so promptly and for having performed so radical an operation. He is gifted with an unusually large amount of personal magnetism, and we must attribute to this happy faculty his having gained the consent of the parents to the early operation which undoubtedly prolonged the girl's life and enabled her to enjoy it to the last without pain. It is to be regretted that an autopsy could not have been held and the cause of death determined. From a scientific aspect, it is unfortunate that the girl could not have lived longer in order to know whether the growth would have returned at a point near the site of the former disease.

DR. GEORGE F. KEIPER, Lafayette, Ind.: According to Parsons in his "Pathology of the Eye," to 1904 there were only 80 cases of epibulbar sarcoma reported. The first was by Baumgarten in 1852, in which he differentiated it from "cancer." The non-pigmented variety numbered but 12. Parsons further states that sarcomata in other parts of the conjunctiva are very rare. It has fallen to my lot to have seen a spindle-cell sarcoma at the inner canthus of the eye and adherent to the eyeball. Though the eye had fair vision, the patient, a woman of 50, accepted the advice to have the orbit exenterated, leaving the eyelids, which did not seem to be involved. At the time of the operation it was a question as to whether the growth might not be also epithelioma. The subsequent microscopic examination showed its true nature to be sarcoma. Over ten years have elapsed with no recurrence. These patients are reported to be usually old. But three other reporters, Krautner, Benson and Schultze, report three cases in which the patients were 14 years and under. Dr. Wood's case, therefore, belongs to that group noted for its extreme rarity at the age of 15, as well as that rare variety of non-pigmented sarcomata.

1. *Traité des Tumeurs de l'Oeil*, vol. 1, pp. 237 to 246.