

The mode of application is as follows: After anesthesia and bleaching by means of several instillations of 5 percent cocain in 1:2000 adrenalin, the applicator is placed upon the corneal ulcer and held there one minute. The extremity of the applicator should be of a size to cover the ulcer exactly; it is heated exactly to 158 degrees F. by a special contrivance. There will be no pain during the application but there will be some for a few hours afterwards.

C. H. M.

Masuda.—Acute Disseminated Choroiditis with Scrofuloderma.—(Nippon Gankakai Zasshi, January, 1917).

In a fifteen year old scrofulous patient, who likewise had hemorrhagic nephritis, there was a suppurating lymphatic gland of the neck, which had partly cicatrized and had given rise to

typical scrofuloderma in its neighborhood. Chemosis and swelling of the eye-lids appeared on each eye, which was accompanied by dull pain. Ophthalmoscopic examination showed pale yellowish spots, which were more or less round, and a few of which were the size of the papilla. These spots were not accompanied by pigment and lay under the retinal vessels. They were more frequent in the equatorial zone leaving the neighborhood of the papilla and macula free. The affection was more pronounced in the R. eye than in the L. It was interesting to note that the fundus disease appeared and proceeded with the swelling of the eyelids. The author thinks that this form of choroiditis has not yet been described, and calls it acute disseminated choroiditis with scrofuloderma.

KOMOTO.

SOCIETY PROCEEDINGS.

SECTION ON OPHTHALMOLOGY, COLLEGE OF PHYSICIANS OF PHILADELPHIA.

OCTOBER 18, 1917.

DR. S. LEWIS ZIEGLER, Temporary Chairman.

Operation for Contracted Socket.

Dr. P. N. K. SCHWENK showed a case of contracted socket in which he devised a new feature of transplanting a flap with a pedicle. The first step was a canthotomy. The conjunctiva was then undermined to the margin of the lower lid, and the skin loosened 6 mm. downward. The conjunctiva was brought into the cavity and held there by two hairpin sutures through the lower lid and tied over two pearl buttons. A large flap twice the width of the denuded conjunctiva was taken and placed in the orbit, suturing the lower part of the flap to the lower edge of the conjunctiva and the upper part to upper edge. The flap was placed into the canthotomy angle, then the ends of canthotomized lids were united over

the pedicle by a strong hairpin suture tied over a pearl button. The edges of the area from which the flap was taken were then united and a conformer was inserted. The sutures were allowed to remain seven or eight days.

Relation Between Eye and Ear as Shown by Bárány Tests.

DR. ISAAC JONES and DR. H. MAXWELL LANGDON said that knowledge of the relation between the ear and the eye was first recognized in 1825, when Fleurens noticed that excision of portions of the labyrinths of animals caused ocular movements and disturbances of equilibrium. At the same time, Perkinge produced nystagmus and vertigo by turning human beings. Robert Bárány has elaborated and made practical application of the field of knowledge thus opened.

The ocular mechanism depends on ear stimuli for precision of movement and steadiness of fixation. Impulses from the right ear tend to draw both eyes to the left and impulses from the left ear tend to draw both eyes to the right. Interference with the normal

functioning of the ears results in nystagmus. Bartels makes the statement that in rabbits ocular movements depend entirely upon stimuli from the ears and section of the acoustic nerves produces complete loss of eye movements.

It is now definitely known that the ear consists of two organs of distinct and separate function: the cochlea, which is the organ of hearing, and the vestibular labyrinth, which is the sense organ of balance. The balancing portion of the ear consists of two tiny sacs known as the utricle and saccule, and of three semicircular canals. The utricle recognizes movements in an antero-posterior direction and the saccule movements in a lateral direction. The semicircular canals detect rotary movement of the body in all planes.

The new ear tests consist of stimulation of these semicircular canals by either turning the patient in a chair, douching the ears with hot or cold water, or by the use of the galvanic current to the ears, producing a rhythmic nystagmus and vertigo; for example, turning the individual ten times to the right in twenty seconds, with the head upright, stimulating both horizontal semicircular canals, produces a horizontal nystagmus to the left, subjective sensation of turning to the left and "past-pointing" to the right. (By past-pointing is meant the inability to find with the eyes closed a spot, which the finger has previously touched, the arm being kept stiffly extended, having been raised above the head and again lowered.) Turning in a chair produces these phenomena by mechanically causing a movement of the lymph in the canals. Douching with hot or cold water produces this circulation of the lymph by changing its specific gravity.

Based on a study of several hundred clinical cases and a considerable number of operations and autopsies, it is believed that the following are the pathways over which these stimuli are transmitted to the eyes to produce the nystagmus and to the cerebrum to produce the vertigo.

Drs. Langdon and Jones have brought out certain facts in regard to these pathways, some of them definite, others needing further analysis. Our present belief, in fact, is as follows:

1. The fibers from the horizontal semicircular canals pass through the VIII nerve, enter the brain-stem at the junction of the medulla oblongata and pons and continue directly to Deiters's nucleus and there divide into two pathways.

(a) The vestibulo-ocular tract concerned in the production of the nystagmus. These fibers go from Deiters's nucleus to the posterior longitudinal bundle, through which they pass to the various eye muscle nuclei, from which through the III and IV nerves they are distributed to the eye muscles themselves.

(b) The vestibulo-cerebello-cerebral tracts responsible for the vertigo. From Deiters's nucleus this path enters the cerebellum through the inferior cerebellar peduncles to the three vestibular cerebelli nuclei of the same side, from which it proceeds upwards through the superior cerebellar peduncle and continues to the cerebral cortex from both sides, but more particularly the opposite side, through the crura cerebri. The cortical areas which receive these fibers are postulated by Mills to be in the posterior portion of the second temporal convolutions, adjacent to the cortical areas for hearing.

2. The fibers from the vertical semicircular canals have a very different course; after passing through the VIII nerve they immediately ascend into the pons and at a point above the middle of the pons they have a division into two pathways similar to the division of the horizontal canal fibers at Deiters's nucleus.

(a) The vestibulo-ocular tract, the fibers entering the posterior longitudinal bundle, to be distributed to the eye muscle and finally to the eye muscles themselves.

(b) The vestibulo-cerebellar-cerebral tract reaches the cerebellum through the middle cerebellar peduncle, entering the cerebellar nuclei of the same

side; from this point the pathway is identical to that of the fibers from the horizontal canal, through the superior cerebellar peduncle to the cerebral cortex of both sides.

The internal ear and these intracranial pathways constitute our conception of the "vestibular apparatus," and a knowledge of this is of use to the ophthalmologist in the study of ocular palsy and spontaneous nystagmus.

Epithelioma of Lid and Cheek, Methods of Cure.

DR. G. ORAM RING exhibited a male patient, aged sixty-five years, from whose lower right lid he had removed an extensive epithelioma by ordinary surgical means, the denuded area having been covered by an epithelial graft from the forearm.

The operation was performed fifteen years ago. The grafts adhered perfectly and the lid remained normal in appearance until two months ago. The cicatricial ectropion now present is the outcome of a plaster treatment applied by a so-called "cancer doctor" to an epitheliomatous splotch on the cheek, which developed about eight years ago after the lid operation. The splotch referred to had been treated by an expert roentgenologist for several years, mainly by X-rays and for some months with radium, to no purpose. The plaster accomplished the eradication of the disease in two months when well-known forms of radiant energy had failed after several years of trial, but with an unfortunate cicatricial contraction of the lower lid.

The ingredients of the plaster were arsenic, sulphur, eupatorium feniculoides, or dog fennel, and ranunculus, or crowfoot. The quantities and method of application were detailed. Dr. Ring's purpose in presenting the case was not to advocate the use of the plaster, notwithstanding its merit, but to insist upon a less dogmatic adherence for so long a period to a method which had clearly failed.

A prompt and satisfactory result could have been accomplished in Dr. Ring's judgment, by the application of the method of electrothermic desicca-

tion, with which the profession in Philadelphia has been made familiar, especially by the work of Dr. W. L. Clark. It was felt that the bloodless devitalization of malignant disease of the type referred to could be accomplished with promptness, certainty and precision by the desiccation method, thereby minimizing the cicatricial complication.

DISCUSSION—Dr. William L. Clark said he appreciated the invitation to discuss the respective merits of the various methods practiced for the treatment of epitheliomas. His experience, covering a period of ten years, had been such that he had formed well-defined conclusions upon the subject.

The methods considered were operative surgery, chemical caustics, thermocautery, roentgen rays, radium and the desiccation methods. The class of epitheliomas were confined to those of basal cells or rodent ulcer type, especially those appearing upon the eyelids and adjacent parts. The keynote of success, so far as permanency of cure is concerned, was the thorough destruction of the local lesion by whatever means employed, by one treatment, for he considered it folly to allow any malignant tissue to remain after starting treatment, for there was danger of stimulation of the growth by so doing.

Nothing more was necessary in the class of epitheliomas under discussion, as they are of relatively low-grade malignancy, progress slowly, and seldom if ever metastasize. Another factor of importance, in addition, is the cosmetic result, and in choosing a method for the treatment of a given case the one that combines an equal chance of cure together with a good cosmetic result should be selected.

Operative surgery is efficient if performed radically, but the cosmetic result leaves much to be desired. Secondary plastic operations often improve this condition, but more often fail. Operative surgery has the added disadvantage of opening blood and lymph channels, favoring recurrence. The best argument against operative surgery in the treatment of these

lesions is the fact that cases are being continually referred for other treatment by the highest exponents of the art of ophthalmic and general surgery.

The use of chemical caustics, such as nitrat of silver, phenol, etc., is most reprehensible, as they serve only to stimulate the growth. Pastes of arsenic or zinc chlorid are often successful, however, when used by physicians experienced in their use; but the results are by no means constant, and even in the hands of experienced men, failures are frequent. The reason for the failures can be readily seen. The depth of destruction cannot be accurately determined, and if one malignant cell is left remaining, recurrence is certain. The application is painful, there is danger of applying pastes on the eyelids, and there is frequent unnecessary scarring. When a good result was obtained it was a matter of luck.

Thermocautery is superficial in action, tends to stimulate the lesion and produces a contracted scar. Its use should be condemned. This applies either to the thermocautery or electrocautery.

The roentgen rays are successful in a fair percentage of cases, and when they are successful the result is ideal, both from a curative and cosmetic standpoint. The results, however, are by no means constant, and from Dr. Clark's own experience and observations from the experience of the best roentgenotherapists he believed that there was a tendency to recur in a large percentage of cases sooner or later unless treated very early. It also has been observed that when the roentgen rays are used to the limit and fail that the tissues are in worse condition than before treatment, and because of this lowered vitality, less amenable to other treatments. More than one X-ray treatment is usually required, and often the lesion is stimulated instead of retrogressing. There is also some danger to the eye in treating epithelioma of the lids.

The same objections apply to radium as to the X-rays, although often good results are obtained by them both.

The desiccation method is one which

embraces the advantages of all and has none of the disadvantages of the methods mentioned. The X-rays and radium may, however, be used in some cases in conjunction with desiccation to advantage. It destroys the lesion thoroughly to any depth desired, and the control is so accurate that the smallest discernible point may be treated without danger, even on the cornea. Lesions may be destroyed with one treatment, blood and lymph channels are sealed at once, and there is no resultant contracted cicatrix. There is a minimal amount of destruction of normal tissue. The percentage of recurrence computed from 150 cases of epithelioma of the eyelids, one year or more, is less than 3 per cent.

From a curative and cosmetic standpoint, Dr. Clark believed that there was no doubt that the desiccation method is far superior to any method known at the present time for the treatment of basal-cell epitheliomas of the eyelids and adjacent parts.

J. MILTON GRISCOM,
Clerk.

COLORADO OPHTHALMOLOGICAL SOCIETY.

November 17th, 1917.

DR. EDWARD JACKSON, Presiding.

Glaucoma Secondary to Perforating Corneal Ulcer.

DR. G. F. LIBBY presented a boy of 12, first seen by him $7\frac{1}{2}$ years before on account of a suppurating ulcer of the right cornea, with hypopyon and iritis. The ulcer had perforated, healing slowly under the usual treatment, with a resulting leucoma adherens.

The child was not seen again until Nov. 2, 1917; and then only by chance. No history of further ocular disturbance was recently obtainable from his father. Examination revealed a thin leucoma in a cornea 13 mm. in diameter as compared with $11\frac{1}{2}$ mm. for the fellow eye, pupil moderately dilated, deep anterior chamber, the old anterior synechia absent, two pigment deposits on the capsule, clear lens and vitreous, with a deeply excavated optic