value lies mostly in the rapidity with which one can find the axis of astigmatism even of small degrees, and also as a confirmatory test when the full correction has been put up. The principle on which the test is based is the cutting out of all rays between the two extreme ends of the visible spectrum. Not all specimens of cobalt glass do this in a satisfactory manner, but a good cobalt allows only red rays and blue rays to pass through. As the refrangibility of the blue rays is much greater than that of the red rays, they are brought to a focus sooner. In a normal emmetropic eye, where a point of white light placed at distance of 6 metres is focussed on the retina, the red rays will have their focus behind the retina and the blue rays in front of the retina, and the two pencils will intersect in the retina and give a uniformly coloured light with sharp edges. If the eye be myopic a red centre of light will be seen with a blue fringe, and if hypermetropic a blue centre with a red fringe. Hypermetropic astigmatism gives a blue centre with red dots on each side and the inclination of the dots is at right angles to the axis of the astigmatism. In mixed astigmatism the blue extends to a rod with the red on each side and in myopic astigmatism one gets a red centre with blue caps extending from it. The test is only occasionally serviceable, as it is entirely a subjective test, but at times it may save ten or fifteen minutes' work and give a very clear indication as to the nature and degree of error.

ABSTRACTS

I.—REMEDIES


(1) Gérard has elaborated a technique for trachoma which, after three years' use, he recommends very highly in the present article. He has tried other remedies but gets better results, at least in the acute and exuberant trachomas, with oxidised naphthol-camphor, accompanied by iodine and zinc chloride, than with any other. In 1916 he suggested that trachoma was a local manifestation of tubercle, and finding confirmation of the presence of tuberculous lesions in many of his bad trachoma cases he thought to apply the anti-tuberculous drugs to a disease which he associated with tubercle. With certain precautions, which he has elaborated and illustrated in the present paper, he finds that naphthol-camphor is well tolerated,
is less painful than copper and never leads to corneal lesions. The
naphthol-camphor should be freshly prepared but allowed to stand
exposed to light and air till it has become oxidised, as evidenced by
its syrupy consistence and its brownish mahogany colour.
Two parts of camphor, one part of naphthol warmed gently, then
filtered away from the air, are used, then the mixture is left in a
clear glass vessel to oxidise.

The special point of his technique is the use of fine old linen in
the shape of a small rectangle with a fold across, this folded part
being placed under the everted upper lid to protect the cornea. In
this way two layers of linen lie in front of the eye; the anterior one
can be used to dry the upper lid conjunctiva just before the
application is made with a small sable brush well soaked in the
solution and then wiped nearly dry before use, while the posterior
layer of linen lies against the cornea and protects it. Two or three
fairly firm applications from one side to the other, limited to the
affected parts of the conjunctiva, are made, then the patient is asked
to look up; when he does this the upper lid rights itself and the
inner surface of it comes against the front layer of linen, which acts
like blotting paper and takes up any excess of the caustic. The
linen is kept in place for three to five minutes after the application,
by which time any risk of damage to the cornea will have passed
away. There is sharp pain for three to four minutes, then a
bearable discomfort for another fifteen to thirty minutes, but not
much worse than with silver and considerably less than with copper.
Six or seven hours later the secondary reaction sets in, indicating
the penetration of the drug; this lasts about fifteen to thirty minutes
again but does not occur in every case. Some conjunctival
congestion is produced. Gérard says the patients come back
willingly and regularly for this treatment and feel early the benefits
when the case is acute or the granulations exuberant. The
application is made by the surgeon, and two or three weekly are
enough, over a period of two, three, and sometimes four weeks.

Of Balesi's 38 cases, 17 were definitely cured, while in the more
fortunate cases four to ten applications sufficed to give the normal
appearance to the upper lid. Some of the chronic cases, however,
were helped but not cured, and these seemed to resist all forms of
treatment. Hence Gérard claims a curability and not a definite
cure every time for his treatment. He emphasizes the necessity of
these applications being supplemented by treatment carried out by
the patient between the applications. This complementary
treatment consists of lukewarm compresses, applied to the eye three
to six times a day; of tincture of iodine, 1-2 grammes to 100 of
distilled water, and of drops of zinc chloride at night, starting at
5 milligrams to 10 of water and working up to even 20. Where
severe watering occurs after the applications of the naphthol-camphor
he sometimes uses hot compresses of zinc sulphate, 0.5 grammes to 100 of water two or three times a day.

W. C. Souter.


(2) Rohmer’s method of treating certain inflammatory diseases of the eye by injecting beneath the conjunctiva the serum obtained from a blister on the patient’s body is recommended by Jacovides who has employed it in 221 cases since September, 1914. Most of these (150) were examples of hypopyon keratitis, and of these 140 were cured by two or three injections of serum. Of 51 cases of corneal infection produced by foreign bodies, 30 were cured by two and 21 by one injection of the fluid. A couple of infections after extraction of cataract were cured by four injections, although in one of them an iridectomy was made because the pupil was closed. The author found that the serum from young subjects was remarkably efficacious, whereas that from the old and debilitated had much less power.

S. S.


(3) Aguizy recommends the treatment of infected ulcers of the cornea by the subconjunctival injection of 5 to 10 drops of a solution of sublimate (1:2,000) as near the ulcer as possible, reinforced by the usual means, as heat, atropin, and antiseptics.

S. S.


(4) It is curious how individuals when they have had a success in the treatment of retinal detachment proceed to attempt to modify the pessimistic views which have been generally held with regard to the treatment of this disease. St. Martin’s case has only been two months with the retina re-attached. The case is that of a female butcher, with one eye already blind from an old detachment, who came to the author immediately after the onset of detachment in the other eye. She was myopic about 8D., and presented, as afterwards ascertained, some peripheral choroidal-retinal changes. The detachment occurred as the result of strain
at her work. The treatment consisted in immediate puncture at the site of the detachment (above), subconjunctival injections of salted gelatinized serum, rest in bed, and a pressure bandage. Atropin. Mercury internally was also exhibited. The author insists, contrary to the advice of Deutschmann, that in recent cases immediate puncture should be performed at the site of the detachment, thus not waiting for a superior detachment to become inferior.

Ernest Thomson.

(5) Dor, L. (Lyon).—Cyanide of gold and cantharidine (Krysolgan) in tuberculous affections of the eye. (Le cyanure d'or et de cantharidine (Krysolgan) dans les affections tuberculeuses de l'œil.) La Clin. Ophtal., December, 1919.

(5) Krysolgan is a new salt of gold which is offered as a specific for tuberculous affections. It is a monocyanide of gold-ethylene-diamine-cantharidine, and contains 50 per cent. of gold. This article by Dor is a short review of the work done by others with this new drug. The references are as follows:—Feldt, Berliner Klinische Wochenschrift, 1917, No. 46 and 1918, No. 10; Schnaudigel, Klinische Monatsblätter für Augenheilkunde, 1917, Sept.-Oct.; Hessburg, Zeitschrift für Augenheilkunde, Vol. XL, fasc. 6, page 324. According to Schnaudigel, this drug is undoubtedly a specific in tuberculous disease of the eye. Its action is comparable to that of tuberculin, and cases of chronic uveitis are those which are most favourably influenced.

Ernest Thomson.

II.—MISCELLANEOUS


(1) In this essay, extending to eleven pages, Rochon-Duvigneaud takes occasion to point out some of the directions in which the position of the science and art of ophthalmology might be improved after the war. His main contention is for a much-needed increased collaboration between the teachers of physical optics, physiological optics, ocular physiology, special anatomy, and ophthalmology generally, each of which subjects seems to be at present worked out along its own lines without any reference to the others. Further, he asks that some place should be established—say, on the lines of the Pasteur Institute—to which one could repair for
the purpose of elucidating or having elucidated any of the many problems that arise daily in ophthalmic work. As subjects for special study, he mentions intra-ocular pressure, corneal absorption, corneal grafts, and comparative anatomy and physiology.

His other main point is the dual one, that many men hold teaching posts who are not suited to the work of teaching, but are suited more for laboratory or for clinical work, while many of those who would like to devote time either to teaching or to laboratory work, are unable for financial reasons to do so, but must curtail their hospital and teaching work to allow themselves time for work which is more directly remunerative.

Rochon-Duvigneaud is not without hope that the State, ever parsimonious in the matter of endowments for scientific work, may be induced to endow adequately those whose faculties and inclinations indicate that they should adopt teaching or laboratory work to the more or less complete exclusion of private practice. The actual precise detailed individual teaching, which is so necessary, is compatible neither with a large clinic nor with the penury of the majority of hospital laboratories. He pleads for the retention of the smaller free clinics, which have done so much good by their healthy initiative, in spite of the opposition of the great charities. He regrets, with Parinaud, that although so much in the study of vision has been done by physicists and mathematicians, so little has been done by biologists and physiologists.

He hopes to elicit discussion to bring out the necessarily diverse points of view of other workers.

W. C. Souter.

(2) Thomson, Alexis (Edinburgh).—The grafting or transplantation of tissues. Edinburgh Medical Journal, March 1917.

(2) This lecture on the transplantation of tissues, by Thomson, appeals but indirectly to the ophthalmic surgeon, although the subject is obviously of no little importance to the general surgeon. The best prospect of success is by the transference of a portion of tissue from one part of the body to another part of the same animal, autoplasty. Next comes homoplasty, that is, the transference of tissues from one animal to another of the same species. Heteroplasty, the transference of tissue from one species of animal to another, is the method least likely to succeed. It has been suggested that all protoplasm is specific for each organism and varies with the individual (Ullman).

Certain surgical details making for success include careful handling of the graft, absolute contact between graft and soil, and the exclusion of all infection. Of all the tissues, the blood and the epidermis can be transferred with the greatest likelihood of success.
The whole thickness of the skin may be employed to cover a raw surface, and if successful, it yields a stronger and more enduring covering than is obtained from epidermis alone. Whenever feasible, a two-stage method is employed in the transplantation of a completely detached flap of skin, as in the Italian operation for the restoration of an eyelid. In all methods it is essential that the flap be cut generously, and a rough guide is to cut the flap about one-third larger than the gap it is destined to fill. It must not, of course, be subjected to the slightest tension or to undue pressure.

Transplantation of the mucous membrane follows that of skin in most of its details, but the difficulty of securing asepsis is a serious handicap. Success, however, has attended the formation of a new eyelid from the tissues of the lip. We need scarcely follow the author into his discussion of the transplantation of blood-vessels, bones, teeth, nerve tissue, tendons, and the like.

S. S.

BOOK NOTICES


Edward P. Hyde, Director. 1919.

This is the second number of the first volume of Abstracts of Papers published from this Laboratory.

One cannot speak too highly of the work done in this institution, and it seems a great pity that such a good example is not followed in this country in connection with various industrial undertakings.

The volume contains abstracts of thirty-four papers, most of which are purely physical. Abstracts of a few given below have a direct bearing on ophthalmology. The others should be studied by those who are interested in the physical side of the subject.


It has been recognized for some time that the radiation from a quartz mercury arc, or from an iron arc, or from any light-source emitting large quantities of ultra-violet rays is harmful to the eye. It may be assumed that wave-lengths shorter than 350 μμ are injurious to living tissues. The object of the investigation is to determine the wave-lengths in the ultra-violet region of the spectrum which are injurious and their mode of action in producing the injury. The following experiments were made to determine the mode of action of ultra-violet radiation in coagulating or rendering insoluble the proteins of egg white and of the crystalline lens.