

“Experimental Heterogeneous Corneal Grafts.” By MR. J. W. TUDOR THOMAS.

A series of corneal grafts in rabbits was described, the grafts being taken from the eyes of animals of another species (mostly cats). A number of these grafts became united, but did not exhibit the transparency that would be expected had they been homogeneous grafts.

The experiments lend confirmation to the view that heterogeneous grafts should not be used for corneal transplantation on man.

The microscopic appearances of heterogeneous grafts were described and illustrated.

ABSTRACTS

I.—PATHOLOGY

(1) **Shapland, C. D. and Greenfield, J. C. (London).**—A case of neurofibromatosis with meningeal tumour involving the left optic nerve. *Trans. Ophthal. Soc. U.K.*, Vol. LV, p. 257, 1935.

(1) **Shapland and Greenfield** report the case of a woman aged 22 years with neurofibromatosis and a meningeal neoplasm affecting the left optic nerve.

At post-mortem the left optic nerve was found to take an S-shaped course in the left orbit and to be 1.5 cm. in diameter. One centimetre behind the globe the sheath of the optic nerve was distended with fluid, the optic nerve was flattened and the fibrous trabeculae increased. The origin of the right oculomotor nerve was compressed and in the right ponto-cerebellar angle there was a pyramidal, lobulated and encapsulated mass and a smaller rounded mass in the left ponto-cerebellar angle. Neurofibromata were also found in the centre of the spinal cord, the cauda equina and root fibres, one in the skin and another in the scalp and intracranial formations on the inner surface of the dura over the vertex at the sides of the falx cerebri and at the base of the middle cranial fossa.

Microscopic examinations of these neoplasms showed that neurofibromata of the nerve roots and the neoplasms attached to the cranial dura and in the spinal canal proved to be psammomata. The cells showed a typical palisade arrangement in some places intertwined bundles of fibres and small spaces. The nerve fibres that passed round a neoplasm spread out in a fan-like manner and showed some loss of the myelin sheath.

Sections of the retina showed thickening of Müller's fibres and

breaking up of the outer nuclear layer adjacent to the optic disc by neuroglial overgrowth. At the optic disc the arterial walls were thickened, the veins dilated and there was evidence of perivascular lympho-plasma cell infiltration.

The neoplasm in the left optic nerve sheath was a psammoma with calcified spherules. Greenfield thinks that it is probable that this was peripheral extension of the neoplasm of a similar character in the left middle cranial fossa.

The authors comment on the association of von Recklinghausen's disease with meningeal psammomata and glioma affecting the frontal lobe and spinal cord and that it is impossible to relate these 3 types of neoplasm to one another.

They discuss the doubts about the origin of von Recklinghausen's disease. The mesoblastic conception arises from the belief that these neoplasms arise from the connective tissue of the endo- and the peri-neurium; Verocay, Durante and Masson think that the formed cells arise from the sheath of Schwann and Rio Hortego maintains that both mesoblastic and neuro-ectodermal elements play a part.

H. B. STALLARD.

(2) **Sjögren, Henrik (Stockholm).—Myoblastoma malignum orbitae.** *Arch. f. Ophthalm.*, Vol. CXXXIV, p. 333.

(2) **Sjögren** here describes a type of new growth never before recognised in the orbit in the case of a boy aged 8 years.

The original tumour, which had been diagnosed as a xanthosarcoma, was, in its essential features, similar to a recurrence examined by the author; it consisted mainly of myoblasts, in places cells of a definitely sarcomatous character, and between these all forms of transition cells.

A second recurrence had the appearances of an ordinary sarcoma. Only one case of myoblastoma with sarcomatous degeneration, occurring in the tongue, had previously been recorded in the literature.

As regards differential diagnosis this type of tumour may be simulated by xanthoma or xanthosarcoma.

THOMAS SNOWBALL.

(3) **Bietti (Naples).—Pathological deposition of fat in the eye after severe endocular inflammation. (Sull'adiposi patologica del globo oculare con particolare riguardo a quella consecutiva a gravi processi infiammatorii endobulbari).** *Boll. d'Ocul.*, January, 1936.

(3) In this long paper **Bietti** reports the examination of a number of eyes which had been subject to severe inflammation. He finds that in the majority of such eyes it is possible to find fatty substances present; only exceptionally can the fat be

recognised clinically as xanthomatosis, but the fats found in the other cases are the same as those met with in xanthomatosis. The relative proportions of the various fats, however, differ in the two groups. In xanthomatosis the ethers of cholesterin take the largest part. In the case of fatty degeneration after serious inflammation, the isotropic fats are formed first and then the anisotropics. In five cases the author records the formation of bone in atrophic eyes; the fat in these had the same characters as the medullary fat of normal bone.

HAROLD GRIMSDALE.

II.—OPTICS AND REFRACTION

- (1) **de' Cori (Florence).**—Some points in the correction of ametropia. (*Alcune osservazioni utili nella correzione delle ametropie*). *Boll. d'Ocul.*, September, 1935.

(1) It is not always convenient to use a mydriatic to discover the total hypermetropia in any case; de' Cori observes that it is often possible, after the monocular correction for each eye has been found, to induce the patient to accept a higher lens by testing the binocular acuity. Another point that he draws attention to, is the fact that where a cylinder is ordered, it may be possible to gain a better result by inverting it, thus a +2.0 D.sph. -1.0 D.cyl. ax. 90° may give a better result than the apparently equivalent +1.0 D.sph. +1.0 D.cyl. ax. 180°.

When a cylindrical lens is ordered, the axis chosen by the patient does not always agree with the axis indicated by the ophthalmometer, and the examiner should always rotate the cylinder to find the axis most acceptable to the patient.

HAROLD GRIMSDALE.

- (2) **Grandi (Florence).**—Amblyopia with strabismus. (*Considerazioni clinico-statistiche sull'ambliopia strabica*). *Boll. d'Ocul.*, November, 1935.

(2) Grandi points out that there are two chief theories of the nature of the imperfect vision in squinting eyes, (1) that the defect is due to non-use (2) that the defect is congenital. The holders of the former theory claim that the defective eye may be educated up to a better vision. The others deny the possibility. As a result of his personal experience the author concludes that in the majority of cases the first idea is correct and that therefore education is able in large measure to restore the lost power; in certain subjects, however, no improvement follows and he concludes that squint must be of various kinds, but that hitherto we have not been able to separate them clinically.

HAROLD GRIMSDALE.

- (3) **Panico (Rome).**—The aspect of the external muscles under the slit-lamp. (*Aspetto biomicroscopico dei muscoli retti oculari*). *Boll. d'Ocul.*, September, 1935.

(3) The tendon of the rectus externus muscle may usually be seen on careful examination, especially in aged subjects; the fibres can be seen running parallel under the conjunctiva with no junctions; the area of attachment to the sclera is a ridge which may be straight but is often wavy.

The tendon of the internal rectus may also in some cases be visible, but **Panico** states that the other tendons never can be seen.

HAROLD GRIMSDALE.

III.—MISCELLANEOUS

- (1) **Folk, M. L. and Soskin, S. (Chicago).**—The fundus oculi in diabetes mellitus. *Amer. Jl. Ophthal.*, Vol. XVIII, p. 432, 1935.

(1) **Folk** and **Soskin** have made careful fundus studies on 150 diabetic patients and 150 non-diabetic controls. Their work endeavours to bring out the correlation of certain retinal conditions with age, duration and severity of diabetes and its complications.

They define certain clinical criteria for diabetic retinitis, arterio-sclerotic retinitis, albuminuric retinitis and arteriosclerosis. According to their observations they maintain that diabetic retinitis is a definite entity and its incidence is greater than is generally believed.

They found that the incidence of retinal arteriosclerosis is but little higher in diabetics than in non-diabetics in the same age groups and when present is generally less severe. The authors believe that careful diabetic management lessens the incidence of retinitis and improves it when present.

H. B. STALLARD.

- (2) **Merrill, H. G. and Oaks, L. W. (Provo, Utah).**—Oculoglandular tularemia. *Amer. Jl. Ophthal.*, Vol. XVIII, p. 453, 1935.

(2) **Merrill** and **Oaks** report the case of a male aged 18 years who contracted oculoglandular tularemia after slaying a rabbit with a piece of rock and thereby splashing his face with the rabbit's blood. It is probable in this case that the bacteria tularense entered the conjunctiva. Oedema and swelling of the lids and frontal region on the affected side heralded the disease. A thin straw-coloured discharge came from the conjunctival sac and nausea, headache, pyrexia and delirium were also noted among the signs and symptoms.

On the lower palpebral conjunctiva there were five discrete

rounded yellowish-grey infiltrations about 3 mm. in diameter and a large central area denuded of corneal epithelium which healed in five days.

The pre-auricular, parotid, submaxillary and anterior cervical lymph nodes were enlarged and indurated. Intra-nasal diphtheria complicated this case and necessitated the administration of diphtheria antitoxin.

A review of the geographical distribution and source of the bacterium tularensis is given at the end of this paper. The disease is present in the Western States of Northern America, Russia, Japan, Norway, Sweden and Canada. Rabbits, rodents, coyotes, sage-hens and grouse are infected. The female wood-tick transmits the infection through its eggs to the larvae. The disease is not transmitted from man to man.

The bacterium tularensis is pleomorphic and may assume coccoidal or bacillary forms.

H. B. STALLARD.

CORRESPONDENCE

To the Editors of THE BRITISH JOURNAL OF OPHTHALMOLOGY.

SIRS,—The following case may be considered of sufficient interest to be included in your columns. It appears to belong to that group of cases which Foster Moore describes in his "Medical Ophthalmology" as occurring "as an isolated phenomenon quite apart from progressive disease. . . . and, indeed, as a congenital manifestation." Foster Moore describes various types. MacRae in a recent article in the "Transactions of the Ophthalmological Society" describes a case, and also refers to Adie, on the 'tonic pupil,' in the *Brit. Jl. of Ophthal.*, of August, 1932. However, the present case seems to present features of its own.

History. The patient, a boy of 12, first came under the observation of an oculist in February, 1935. The note at that time is that "the pupil, is dilated, sluggishly reacting to light." I first saw him in June, 1935, when his condition was unchanged. It is not clear whether the condition existed from birth or not.

Present condition. The pupil, when I first saw him, was widely dilated, and reacted very slowly, and incompletely, to bright direct light. The indirect reaction was difficult to establish as undoubtedly present. Eserine had no effect. There was in addition, marked cycloplegia, which seems to be uncommon in these cases, and reading unaided with this eye was not possible. For what it might be worth, I ordered +3.25 sph. for near work