TOURNAY'S REACTION

BY

P. G. DOYNE

LONDON

THE data for this paper were obtained by examining the eyes of 40 cases of general paralysis of the insane for the presence or absence of Tournay's reaction. These cases were seen at the Springfield Mental Hospital and I must express my indebtedness to Dr. Worth, the superintendent of that hospital, for affording me every opportunity for so doing. In addition to these cases of general paralysis of the insane, in the course of routine examination of all patients at that hospital I looked for this reaction. Tournay describes the reaction as follows:—"When a man whose ocular apparatus is normal, whose pupils are equal, reacting normally to light, contracting normally and equally with movements of convergence and accommodation, looks strongly to his right and maintains this position the right pupil becomes larger than the left. Thus isocoria being the rule in anterior fixation, anisocoria becomes the rule in lateral fixation." Chenet and Noyer* in a study of this reaction arrive at the following conclusions:—1. In healthy subjects dilatation of the abducted eye is the rule. With regard to the contraction of the pupil of the adducted eye, it was extremely doubtful if this ever occurred. 2. The reaction was present in the cat and the dog, but not in rabbits or horses. 3. Mydriatics suppress and miotics abolish the reaction. 4. In pathological cases; (a) the iris being mobile, the reaction was present in all ocular affections, even in those (optic atrophy) which destroy sight. (b) In cases of paralysis of the sympathetic the reaction persists. (c) In 15 cases of lesions of the central nervous system (tabes, general paralysis of the insane, and anterior poliomyelitis) the reaction was absent. My own experience closely confirms the above. Certainly I never with certainty observed contraction of the pupil of the adducted eye. I attend this hospital in the evenings between five and seven. When I first started testing for this reaction it was winter time, and, naturally, I stood the patient in front of the light in order to observe the pupils clearly. At that time I obtained dilatation of the pupil of the abducted eye readily; but later on, during the summer, when the room became more evenly illuminated by natural light, I found it more and more difficult to obtain the reaction. It would appear that in the normal eye, at any rate, the amount and nature of the surrounding illumination is a factor in the

* For abstract see *British Journal of Ophthalmology*, Vol. V, (1921), p. 520.

production of the reaction. Nevertheless, the conclusion which I arrived at is that in extreme abduction the pupil of the abducted eye dilates, but that the ease with which this dilatation can be obtained varies within wide limits from case to case. W. Bevan Lewis, in a paper on "Ocular symptoms occurring in general paralysis of the insane" (*Trans. Ophth. Soc.*, Vol. III., p. 204), concludes from the observation of 60 cases of general paralysis of the insane that the loss of reflex dilatation of the pupil on sensory stimulation is the earliest and most constant ocular sign in this condition. I had this observation in mind when examining my series of cases. When having my own eyes tested for Tournay's reaction, I experienced a feeling of strain and discomfort when the eyes were strongly lateralized, and this discomfort was confined to the abducted eye. This is not, of course, akin to cutaneous stimulation; but as, in the majority of cases, it is only on extreme abduction that the reaction can be obtained, and as this extreme abduction causes discomfort, I thought that this might have something to do with the production of the reaction.

With regard to my series of 40 cases of general paralysis of the insane, the reaction was present in 15, absent in 18, doubtful in 4, and unilateral in 3 cases. Of these 40 cases, 20 had Argyll Robertson pupils, and of these 20 the reaction was absent in 14 cases, present in 4 cases, and doubtful in 1 case. In 5 cases out of 40 the pupils did not react to light or accommodation; in these 5 cases the reaction was absent in 4 and present in 1 case. Of the 3 unilateral cases, in 2 cases the right pupil was inactive to light, while the left pupil reacted sluggishly; the right pupil was also larger than the left. In these cases the reaction was only obtained in the left eye. The other case was similar, with the exception that it was the right eye which had the smaller and active pupil and which showed the reaction.

NOTE ON WERNICKE'S PUPILLARY REACTION

BY

J. D. CUMMINS

DUBLIN

THE restricted usefulness of this reaction, from a clinical point of view, will, I think, be admitted. The theory of the reaction is proof against criticism. But the manner of performing the test is important.

If the region, from which the afferent impulse of the reflex arises, be confined to a relatively small area around the fovea, as Hess