

a reaction to the somatic disturbance, on the one hand, and those of a definitely psychotic nature on the other. As regards the former, he mentions the depression associated with preoccupation, which differs essentially from melancholia and stupor. Tormented with headache, such patients avoid even the minimum effort of mind and body. But in the author's experience most cases present definitely psychotic symptoms, which are very numerous and which vary greatly in different individuals. The cerebral tumour, in disturbing the normal equilibrium of cerebral processes and diminishing the organic resistance of the brain, may cause a predisposition to succumb to other psychopathological influences. He refers to Gianelli's case of juvenile alcoholism in whom the advent of a cerebral tumour ushered in symptoms of an alcoholic psychosis, and adds that paranoidal tendencies may be intensified.

He finds that confusional states are the most frequent, and that it is possible to distinguish between that due to general intracranial pressure and that produced by a frontal or callosal tumour. In the former the patient can be roused. He talks slowly and seldom and his responses are retarded. Remote memory is good, but recent is impaired. Reflex attention is reduced, but voluntary attention is preserved. Such symptoms are prodromal, and tend to pass into more severe confusion as the tumour grows, when disorientation becomes prominent and associated with that form of amnesia in which the patient regresses to an earlier stage of his life. Recent memory becomes more impaired, but the patient still retains his critical faculties. This stage is apt to pass into pathological sleep, which must not, however, be confused with coma. In a still more advanced stage apathy supervenes, from which the patient can be roused with difficulty, and in which there is reduced activity, complete lack of initiative, no spontaneous speech and an expressionless and immobile face. Finally there is coma, with, sometimes, a catatonic state with *flexibilitas cerea*, due, possibly, to cerebellar catalepsy. Other symptoms of interest are automatism, as in epilepsy, with subsequent complete amnesia for the period of the fugue, typical melancholia with suicidal tendencies, compulsion neuroses, and states simulating paralytic dementia and Korsakov's syndrome.

The author concludes that mental symptoms are of notable value in the diagnosis of cerebral tumour but of little value in its localization. He stresses the fact that they are early and constant in tumours of the frontal lobes. He further agrees that prodromal symptoms and signs, whether mental or neurological, are of more value in localization than late ones.

H. W. EDDISON.

*Some Obscure Symbolic Muscular Responses of Diagnostic Value in the Study of Normal Subjects.* (*Amer. Journ. Psychiat.*, July, 1931.) Krout, M. H.

Given a certain signal in a certain situation, reference is at once made to a pre-existing system of relationships, of which the signal is symbolic, and in which it acquires meaning. This is, briefly,

the thesis expounded here. The article is only a preliminary survey of the ground, but many lines of future research are suggested.

M. HAMBLIN SMITH.

*Effects of Fragmentary and Complete Extirpation of the Cerebellum in the Cat.* (*Arch. of Neur. and Psychiat.*, July, 1931.) Ferraro, A., and Davidoff, L. M.

The authors operated on 16 cats, and summarize their results as follows:

1. The lateral lobes of the cerebellum control the synergy as a whole of the muscles of the homolateral side of the body.

2. The lobulus paramedianus seems also to possess synergic control of both fore and hind legs of the same side, the area controlling the forelegs being in some animals located in front of the area controlling the hind ones.

3. Crus I of the lobus ansiformis controls the synergic energy of both front and hind legs with a predominance over the front ones.

4. When to the removal of crus I and crus II the removal of the paraflocculus is added, asynergia of the tail is a more manifest symptom.

5. The lobus simplex does not appear to possess any specific synergic centre either for the neck or for the trunk.

6. The lateral portion of the anterior lobe, the lobulus lunatus anterior, seems to participate also in the synergic control of the muscles of the homolateral legs.

7. In the vermis there seem to be no definite localized centres. This formation seems to control as a whole the musculature of the head, neck and trunk.

8. In the vermal portion of the anterior lobe there is a controlling mechanism for the synergy of the neck, located mainly in the culmen. The removal of this area results in asynergia of the muscles of the neck without any effect over the rest of the trunk.

9. The remaining part of the vermis is concerned with the regulation of the trunk musculature as a whole, although the clivus, folium, tuber, and part of the pyramis are dominantly concerned with the synergy of the shoulder girdle, and of the muscles of the anterior portion of the trunk. The pyramis, the uvula and the nodulus are more concerned with the regulation of the muscles of the pelvic girdle and with the muscles of the posterior part of the trunk.

10. The removal of the vermis is followed by considerable dysmetria of the trunk, especially pronounced over its posterior portion.

11. When to removal of the vermis is added removal of the lateral lobes, the clinical result is a pronounced dysmetria of the trunk, to which dysmetria of the legs is added. The loss of co-ordination following total extirpation of the cerebellum in the cat at least is most marked in the posterior part of the body.

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