

urea ; thus ammoniacal products are excreted related to carbamic acid, especially the carbamate of ammonia. These are the poisons which excite the epileptic conditions.

Guidi found that the administration of carbonate of ammonia, while causing no increase in the amount of urea excreted, has a marked effect in increasing the amount of ammoniacal products excreted. Simultaneously the number and severity of the epileptic attacks were increased. The dose of carbonate of ammonia never exceeded five grains. In hysteria the amount of carbonate of ammonia administered was as much as twenty grains, but it had no harmful effect and did not induce epileptoid fits.

The researches of De Bucke confirm the findings of Guidi with regard to the excretion of nitrogenous products. De Bucke, however, is of opinion that the cause of true epilepsy is an auto-intoxication, due, not to the intermediate or terminal products of the tissue, such as urea, ammonium carbonate, etc., but to a true poison present in the blood and specific to epilepsy, and belonging to the character of cytotoxins. This research of Guidi is one of a number which he has made on the nature and cause of epilepsy. An extensive bibliography is given. In it he makes no reference to the work done by Haig and Turner with respect to epilepsy.

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*Study of Seventeen Cases of Epilepsy from a Point of View of the Glands of Internal Secretion* [*Étude de dix sept cas d'Épilepsie au Point de Vue de l'Etat des Glandes a Sécrétion Interne*]. (*Rev. de Psychiat., Sept., 1908.*) Claude, H., and Schmiergeld, A.

Changes in the ductless glands of epileptics are constant, but these vary in intensity and in site. In all cases, the authors observed changes in the thyroid gland ; in twelve cases, the structure of the gland was completely changed, and they were able to note by the side of portions which had undergone atrophy and sclerosis, limited zones of the compensatory hypertrophy. Changes were also observed in the ovaries four times, twice in the supra-renals, and once in the pituitary body. In seven cases of epilepsy with dementia and organic lesions of the central nervous system, the alterations of the glands were, as a rule, less marked when compared with cases which showed no cerebral lesions, and this, the writers consider, demonstrates amongst other things that in the pathogenesis of certain epileptic crises the functional disturbance of these glands is able to be ascribed as a cause, probably as an intoxication. They consider it might be useful, when treating any particular case of epilepsy, to attempt to rectify any suspected glandular disorders by appropriate remedies.

But neither macroscopical or microscopical examinations are sufficient in themselves to state the actions of these ductless glands ; it must be assisted by physiology. Changes in the thyroid, it is true, are often noted in the insane, but even if these be characteristic similar effects are not always produced.

Results from organo-therapy are often most disappointing.

SIDNEY CLARKE.