

fatally, but in one there was atrophy of the muscles affected in the left arm. Kurella cites other observations, going to show that multiple sclerosis and an affection like general paralysis has been occasioned by the discharge of an electric current from the telephone, in opposition to Gellinek, who treated such injuries as of nervous or mental character. Kurella contends that the strong currents used have actually caused physical lesions of the heart and nerve tissues, especially small ruptures and hæmorrhages.

Kurella's paper, which has been published in a separate form by A. Barth, Leipzig, led to a discussion in which Dr. Hoffmann argued that these effects following the use of the telephone were of mental origin. Steiner sustained Kurella's view, but he does not consider that lightning passes through the telephone wire. There was a little epidemic in Cologne in which many telephonists suffered injury, but there was no thunderstorm at the time. WILLIAM W. IRELAND.

3. Clinical Psychiatry.

Contribution to the Clinical Study of the Pharyngeal Reflex [Contributo allo Studio Clinico del Riflesso Faringeo]. (Annali dell Istituto Psichiat. della R. Univ. di Roma, vol. iv, 1905.) Forli, V., and Guidi, G.

That the pharyngeal reflex is not by any means a constant phenomenon is very well known to users of the laryngoscope.

The authors of this paper first examined 98 subjects free from any nervous disorder, with the object of finding out the influence of age on its appearance, with the following interesting results :

In the subjects under fifty the reflex was well marked in nearly 50 *per cent.*, absent in 15 *per cent.*, and feeble in the remaining 35 *per cent.*

In those over fifty, it was well marked in 40 *per cent.*, absent in 31 *per cent.*, and feeble in the remaining cases.

They next give the results of examination of 331 cases suffering from some functional or organic form of nervous disease. Most notably in hysteria, and to a lesser extent in hysteroid neurosis, was there a great alteration in its exhibition.

Kattiwinkel, in a recent publication on the same subject, gave the results of his examination of 104 cases of hysteria. In 100 of these the pharyngeal reflex was abolished. He at the same time noted that the pharyngeal sensations of touch, temperature, and pain, were unimpaired, and deduced from this that the abolition of the reflex for nausea did not point to anæsthesia of the mucosa, as was generally held, but was a sign of interruption of the reflex arc, and of cerebral origin.

The authors' experience in their hysteria and hysteroid cases was very similar, more especially in the graver forms of hysteria. In epilepsy, also, the absence of the reflex was frequently noted, and that this was not due to the bromides was proved by control experiments. The same results were found in neurasthenia. In patients suffering from tabes and chronic alcoholism, there was little apparent alteration, and the same applied to the early forms of general paralysis. In the

later stages of the latter disease, however, the reflex was very frequently absent, as also was the case in cases of cerebral tumour.

In cases of hemiplegia, the reflex was much weaker on stimulating the pharynx on the paralysed side.

The authors hold that these facts confirm Sahli's hypothesis that all the "complicated" reflexes, such as nausea, should be considered as cortico-nuclear, and hence may be altered by any lesion of the cerebral cortex.

They think, in conclusion, that their researches show that the alteration of the reflex is not the result of a morbid condition of the motor-paths, but is due to some lesion of the centripetal branch of the reflex cortical arc.

A. I. EADES.

Research on the Blood-pressure, Pulse, and Temperature in Epilepsy
[*Ricerche sopra la Pressione Sanguigna, il Pulso e la Temperatura degli Epilettici*]. (*Riv. Speriment. di Freniat.*, vol. xxxii, fasc. iii-iv.) Besta, C.

The author finds that the blood-pressure is raised in a large percentage (63 *per cent.*) of the epileptics he examined, but experiences a difficulty in giving an exact explanation for this. He was able to exclude any direct pathological cause, as cardiac or renal disease. The pressure-curve was extremely irregular. It was not modified by the number of fits, nor by the mental or physical condition of the patient; in those cases where the pressure previously happened to be above the normal, after the fits no lowering or return to the normal occurred. Many writers maintain that the epileptic convulsions represent an attempt on the part of the organism to eliminate the convulsive toxins circulating in the blood, and that the toxic power of the blood is greater before the fit occurs, while the opposite holds good of such secretions as the urine or sweat. If this were so, it would be expected that after the fits there should be a return to the normal of the organic functions, such as the circulatory system, more strictly in connection with the disease. That this is not so is shown by the continued high blood-pressure in those cases where this obtained before the onset of the convulsions.

As regards the chemical condition of the urine after a series of fits, there is much difference of opinion. While some authors hold that its toxic properties are much increased, others contend that the experimental results obtained are too inconstant to be of any real value.

The results of the author's experiments on the state of the blood-pressure before the onset of the fits are worthy of note. In no case was there any modification of the general blood-pressure preceding an epileptic seizure, which shows, in his opinion, how different is the mechanism here involved from that occurring in a uræmic attack, which is always characterised by vaso-constriction and marked rise of arterial pressure.

The pulse rate had no direct relationship with the state of the blood-pressure; nor was it modified by the epileptic convulsions, except that it was increased temporarily during these. Like the blood-pressure it followed no regular course, but each case showed some distinctive peculiarity. There were frequently variations in its pulse-rate of from 30 to 40 per minute without any appreciable cause, quite independent