

ulcer. Perforation may occur at any stage in the course of duodenal ulcer, but never without previous symptoms. These symptoms may have been slight, almost negligible, or even neglected, but a reasonably close enquiry will always elicit them. Perforation may be acute, subacute, or chronic, a classification elsewhere elaborated by the writer. The most important information gained by physical examination is the area of tenderness. Dr. James MacKenzie has shown that this area, marked out by pinching the skin away from the muscles, so as to avoid deep pressure, will indicate the situation of the ulcer. In ulcer of the lesser curvature, near the cardia, this will be in the middle line or slightly to the left near the ensiform cartilage. If at the pylorus, it will be lower down near the umbilicus, if duodenal, it will be a little above and slightly to the right of the umbilicus. Gastric ulcer is much more amenable to medical treatment than duodenal; and the writer regards the latter as a far more serious disease. He advises surgical treatment as soon as a positive diagnosis can be made. This generally consists of a posterior gastro-enterostomy with infolding of the ulcer by a double layer of sutures. He insists upon a strict diet for 3 months following operation and that an alkaline bismuth mixture be taken if there is any indication of persisting acidity. The results obtained have been very good. Eleven cases operated upon for perforation with two deaths, 101 cases for other symptoms with two deaths. The end results have also been good, only one case coming up for a second operation on account of subsequent development of a peptic ulcer of the jejunum.

W. L. B.

PATHOLOGY.

UNDER THE CHARGE OF J. G. ADAMI.

JOSEF SORGO and ERHARD SUESS. "Concerning Experiments with Tubercle bacilli of human origin on Snakes and the Alteration of character of these organisms." *Centralb f. Bakt*, 1907, *xliii*, p. 529.

The authors isolated strains of tubercle bacilli from infected human tissues. The characters of these organisms were compared with strains of the bovine, avian, and amphibian tubercle bacilli. Various cultural and inoculation experiments were then carried out. The authors noted that, by the transplantation of many hundred sub-cultures, spontaneous varieties of the organism would occasionally arise. The varieties became fairly permanent in their characters.