

continuous through the pylorus with a similar area on its gastric side. Cases are extremely rare in which such ulceration occurs below the common entrance of the bile and pancreatic ducts, though a similar process is found in the so-called peptic ulcer of the jejunum which in rare cases has ensued after the operation of gastro-jejunostomy.

Acute ulcers are multiple in about fifty per cent of cases. They rarely exceed one half an inch in diameter, being round or oval, with clean cut edges of normal mucous membrane, and are obliquely conical in form, the apex of the cone being directed outwards and extending to the submucous, the muscular, or the serous coat according to the depth attained. Multiplicity is rarely observed in chronic ulcers though their frequent irregular shape is often suggestive of previous coalescence of parts. Their prominent edges are somewhat indurated and there is a condition of mild inflammatory infiltration in the immediately surrounding mucous membrane, their size being variable up to an area of several square inches. In depth they may extend beyond the limits of the viscus affected, without any exaggeration of symptoms occurring, so as to reach such viscera as the pancreas or the liver.

Hyperchlorhydria is a very frequent attending condition, but not always, however, as frequent analyses have demonstrated the continued diminution or absence of free hydrochloric acid in the gastric secretion in some undoubted cases of gastric or duodenal ulceration. In close relation to the existence of hyperchlorhydria is the condition of pyloric spasm and to this in turn a not infrequent gastrosuccorhœa. With regard to hyperchlorhydria it would probably be more to the point to say that frequently repeated analyses in such cases tend to show considerable variations in the amount of free hydrochloric acid present and in the majority of instances reveals an excess.

In practically all cases in which hæmorrhage has occurred the blood presents the characteristics of a secondary or chlorotic anaemia, the average decrease in hæmoglobin being from forty to fifty per cent. The urine which is sometimes scanty presents no definitely special characteristics.

From amongst the long list of complications and sequelæ of this disease may be mentioned as the most frequent, hæmorrhage, perforation, pyloric stenosis, hour-glass contraction, gastric dilatation, gastric tetany, ulcer carcinomatosum, perigastritis, peritonitis, subdiaphragmatic abscess, cholecystitis, empyema, and pulmonary tuberculosis.

Briefly, the symptoms and signs commonly present are, dyspepsia, with acid eructations, pain, vomiting, hæmatemesis, melæna, constipation, loss of flesh, tenderness, localized rigidity, probable tumor formation and anæmia with its attending characteristics. The appetite is variable though good as a rule, but such patients frequently refrain from even moderate eating on account of its consequences.