

per cent., unrelieved nine per cent., died eight per cent. Of this number 114 were followed up and the end results were found to be forty per cent. remaining well at an average time of five years, thirty-six per cent. had recurrence of symptoms, twenty per cent. died from ulcer, and four per cent. from unknown causes. These figures show how misleading the ordinary hospital statistics are, that while eighty per cent. are undoubtedly relieved as a result of intelligent treatment, only about forty per cent. are cured; that while the death rate during the first attack may be eight per cent. or less, the real mortality is about twenty per cent., so that about sixty per cent. of gastric ulcer cases must look forward to death or chronic invalidism. In contrasting these results with the end results of surgical treatment we must bear in mind that many of the cases operated upon were complicated by pyloric stenosis, and that quite a number were operated upon as a last resort when they were not in good condition for operation. Still Eiselberg reports forty-seven per cent. well on an average of four years, when a posterior gastro-interostomy was performed; Munro reports fifty per cent. treated by the Tinney operation, permanently well, forty per cent. by the long and sixty-six per cent. by the short loop posterior anastomosis; Moynihan gives only two failures in 151 operations, both due to faulty technic and cured by a secondary operation. The writer advises intelligent medical treatment for all primary cases of simple round ulcer; if not relieved after six weeks of this treatment, operation should be advised; while in all cases of indurated chronic ulcer, and in all cases of recurrent symptoms after a primary cure, he would operate.

The part played by ulcer in the production of cancer is brought out by Mumford, who found a history of ulcer in 41 cases out of 50 of malignant disease of the stomach. Again, the percentage of cancer occurring in the pyloric region is approximately that of ulcer, and this holds good also for the greater curvature and cardia.

In benign pyloric stenosis surgery has given most excellent results; thus Eiselberg had ninety per cent. well on an average of two years, and Mumford collected 169 cases of ulcer and its sequelæ, and found the end results in 147 to be seventy-one per cent. permanently relieved, fifteen unrelieved, and deaths 8.9 per cent. Mayo Robson in 500 gastric operations reported his mortality in gastro-enterostomy for non-cancerous conditions to be .37 per cent., with 92 per cent. of cures in cases of hæmorrhage and stenosis from chronic ulcer. Hartmann's mortality was 6 per cent., and his end results 92 per cent. Rotgans had a mortality of 5 per cent. and end results of cures in 85 per cent.