**Observations on the Treatment of Peptic Ulcer**

Work continues on new methods of treatment in peptic ulcer. Dr. Ricketts et al. report the results of X-ray treatment given to more than 800 cases of peptic ulcer studied between 1936 and 1947. The rationale of this treatment is of course the view that acid gastric juice constitutes a sine qua non for chronic peptic ulcer and, secondly, that roentgen irradiation depresses the secretory capacity of the stomach. Most investigators have found gastric secretion decreased by radiation, though experimentally tests may produce haemorrhage and even necrosis. The decrease of acid secretion is relatively proportional to the total amount of radiation given, and the depression in most cases occurs very rapidly. Marked individual variations, however, occur in different patients and this tissue susceptibility is unpredictable. Acute changes in the mucosa immediately following radiation may be seen both gastroscopically and histologically, and in many cases complete achlorhydria is produced for a time though a return to previous secretory levels occurs in the majority, months or years later.

A direct correlation seems to occur between depression of gastric secretion and ulcer healing, and in each of 44 patients with achlorhydria persisting for 3 months or longer the ulcer healed completely.

The danger and difficulty of course is in judgment of technique and dosage adequate to depress gastric secretion whilst not injuring the skin or giving rise to any tissue damage in stomach or other systems. Ricketts et al. find gastric secretion easier to depress by radiation in patients with gastric than with duodenal or jejunal ulcer, which is to be expected in view of the higher secretory rate in duodenal patients compared to gastric ulcer patients. There is some evidence, however, that mucosal cells in gastric ulcer patients are more easily injured than in duodenal ulcer patients, and the achlorhydria produced in the former is more frequent and lasting than in the latter. Thus of 47 patients with gastric ulcer 32 (68 per cent) developed achlorhydria as compared with only 106 (30 per cent) out of 352 patients with duodenal ulcer. Gastroscopy of the mucosa following and during radiation was performed in over 100 patients, with a total of over 500 examinations. The changes occurring up to 3 months from irradiation consisted of redness, oedema, haemorrhage and adherent exudate. A small proportion showed a cobble-stone like appearance suggestive of hypertrophic gastritis and a diffusely atrophic mucosa was observed in a further four.

Histological examinations of the stomach showed mainly degeneration of occasional epithelial cells, a cellular exudate and infiltration of the gastric wall with polymorpho-nuclear and later plasma cells, lymphocytes, eosinophils and macro-phages. These changes show that X-ray treatment produces an irradiation gastritis evident one week or more after treatment and persisting in diminishing degree for several months. The inflammation is usually transitory, and the severity of this gastritis is proportional to the decrease in gastric secretion.
Batterman and Ehrenfeld report an investigation into the influence of smoking upon the resistance to treatment and relapse rate in peptic ulcer patients. They conclude that tobacco smoking is detrimental to the welfare of these patients in that response to antacid therapy is inadequate, and the likelihood of severe exacerbations of the condition is approximately 3 to 4 times that of non-smokers, or patients who have ceased smoking. They consider that the use of partially de-nicotinised tobacco is the next best alternative to giving up smoking completely. The number of patients studied was 108, and of those who continued to smoke under treatment approximately half relapsed during an observation period of an average of 60 weeks. The non-smokers under comparable conditions showed only 17 per cent relapse incidence.

Editorial

The evidence did not suggest that tobacco smoking was necessarily a factor in the causation of peptic ulcer, but rather in the failure to respond to treatment. Many patients appeared to respond to giving up tobacco only after several weeks abstinence. The authors conclude that the action of tobacco is due to the nicotine absorbed, which is greater in those who inhale than in non-inhalers, and perhaps partly to reflex irritation of the mucous membrane of upper respiratory passage and pharynx by the smoke.

Dr. Pedersen gives a clinical analysis of approximately 850 cases of bleeding peptic ulcer treated according to Meulengracht’s principles. Of the whole series the death rate from loss of blood was approximately 2 per cent, and in 85 per cent of these fatal cases there was haematemesis compared to 15 per cent having only melaena. In other words, loss of blood by vomiting is much more dangerous than by melaena, presumably because the loss is more rapid in the former case.

The author rightly stresses the increasingly bad prognosis in the older age group and finds that in those over 50 the chance of haemorrhage continuing is approximately one to two. A bad point in prognosis is continuing haematemesis after admission to hospital, and this in the case of a proved ulcer over the age of 50 is in the author’s opinion a definite indication for surgery, which must be done as quickly as possible: in patients under 40 immediate operation is very seldom advisable. Surgery at a late stage of bleeding was attended with high mortality, and of the 850 cases approximately 800 are made up of those under 50 years of age who did not have haematemeses whilst in hospital and of whom only 5 died; the remaining group of 40 patients consists of those aged over 50, with further haematemeses in hospital. Of these 12 died, i.e. a mortality of 30 per cent. The writer concludes that all patients in this small group should be submitted to operation immediately after the first haematemesis in hospital as further haemorrhage is likely to occur, and late surgery is highly dangerous.

Ivy, Littman and others report further work upon Enterogastrone in treatment of ulcer. They have used injections 3 to 6 times per week for a year of this substance, prepared from intestinal extract, on 46 patients suffering from duodenal ulcer, whose previous symptoms had lasted an average of 15 years. The patients were not in hospital, and the dose of Enterogastrone was 200 mg. dissolved in 4 c.c. of sterile water, injected intramuscularly. The recurrence rate of symptoms, and the symptom-free intervals were assessed in these cases during