CURRENT TRENDS IN THE TREATMENT OF JEJUNAL ULCER

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Until recent years the treatment of jejunal ulcer was considered a surgical problem. Recent communications show a trend toward medical management, except in patients with obvious indications for immediate surgery, such as perforation or gastrojejunocolic fistula. In a series of 29 consecutive cases observed at the Cleveland Clinic during the years 1930-1941, inclusive, immediate surgery was used in 4 cases, and medical management was instituted in 25 cases. Of the latter group 7 patients were not followed after the initial period of treatment, but 18 patients are known to have continued with medical management alone. The unusual swing of the pendulum to medical management prompted this review.

In recent years nonabsorbable antacids have been used in the treatment of peptic ulcer. The use of aluminum hydroxide gel was considered an important factor in the medical management of this group of patients.

DEFINITION

In this study the term "jejunal ulcer" includes ulcers which develop subsequent to gastric surgery in the region of the anastomosis between the stomach and jejunum. Synonymous terms in the literature are stomal, anastomotic, or marginal ulcer. All patients had evidence of active jejunal ulcer by x-ray or gastroscopic examination, or both, at the time the diagnosis was established.

SURGICAL INDICATIONS

The 4 patients undergoing surgery had serious complications of jejunal ulcer. Two patients had subacute perforations with abscess formation, and two had gastrojejunocolic fistulas. Other complications of jejunal ulcer, such as obstruction and massive hemorrhage, when not controlled by adequate medical management, call for surgical intervention. In fact, as in the case of primary peptic ulcer, any patient with jejunal ulcer who does not respond satisfactorily to medical management is considered as having a surgical problem.

CLINICAL DATA

Of the 29 cases in this series, 5 patients had had gastric resection, and 24 patients had had gastroenterostomy prior to the development

of jejunal ulcer. The sex incidence was 26 men and 3 women. Symptoms were similar to the original complaints in that the abdominal distress occurred from one to 3 hours after meals, but the location of the distress was usually to the left of and above the umbilicus, instead of high in the epigastrium. In certain instances the pain radiated to the groin simulating ureteral colic. Relief of symptoms by taking food was not as commonly observed as in the case of simple uncomplicated primary peptic ulcer. Six patients gave a history of hemorrhage, and 3 patients had temporary obstruction. The pain was more severe and the incidence of night pain was greater than is commonly seen in patients with primary peptic ulcer. Tenderness to the left of the umbilicus was commonly observed, and the presence of a tender mass was established in some instances.

The presence of a high level of gastric free acidity by aspiration was observed in most cases, but care had to be used to make certain that the tip of the tube was in the fundus of the stomach and not in the jejunum. In the examination of stools while the patient was on a meat-free diet, a positive benzidine test for occult blood was not present in all instances.

X-RAY EXAMINATION

The roentgen examination gave the most important objective information. It should be emphasized that *routine* methods of roentgen examination may fail to show evidence of jejunal ulcer. Our experience with special technics in which the fluoroscopic and film examinations are divided into two parts, i.e., (1) during and after the patient swallows one or two mouthfuls of barium suspension, and (2) later after a complete filling of the stomach, has been reported[1]. Spot films with careful pressure technic at proper intervals have been added in recent years. Examinations made with the first few swallows of barium suspension and at the time the stomach is nearly empty are most likely to demonstrate a niche deformity. The presence of a dilated afferent or efferent loop, disturbances in motility, flexibility, and localized tenderness are also important.

GASTROSCOPIC EXAMINATION

Gastroscopy was used when the roentgen findings were indeterminate. The patient having a gastrojejunostomy may not have gastritis, but if present, it may be a severe ulcerative form of gastritis which will have an important bearing on treatment. The experienced gastroscopist also gives information relative to the patency of the anastomosis and may see an ulcer which has not been visualized by the roentgen examination.

DISPOSITION OF PATIENTS

As previously stated, a series of 29 consecutive cases of jejunal ulcer was observed during the years 1930-1941, inclusive. Four patients had immediate operations for serious complications. It was impossible to follow 7 patients after the initial period of medical management, but 18 patients are known to have continued with medical management alone. Their progress was satisfactory when minimal requirements for adequate therapy were followed. In the few instances of recurrences of symptoms the patient had stopped management a few months after the original symptoms had subsided. Resumption of management again resulted in favorable progress.

Relief of symptoms does not mean that the ulcer is healed. The patient must be impressed with the usual life history of peptic ulcer, that it is a chronic disease, subject to spontaneous remissions and acute exacerbations, and may become complicated by perforation, obstruction, or massive hemorrhage. If favorable results are to be obtained, the patient must follow a well-ordered program the remainder of his life.

CASE REPORTS

Case 1. A 48 year old man entered the Clinic complaining of low epigastric pain relieved by food and soda. X-ray examination revealed an ulcer niche immediately below the stoma. He was placed on medical management which he followed only six months. Three months later symptoms recurred, and he had a massive hemorrhage. He resumed medical management and has made satisfactory progress since that time.

Case 2. A 44 year old man complained of epigastric pain, relieved by food or alkali, and occasional slight hematemesis. X-ray examination revealed an ulcer niche in the jejunum immediately below the stoma. The patient had a complete remission for 3 years, stopped management, and had a recurrence of symptoms. He resumed management with relief for a two year period. At that time he had a nervous breakdown and stopped management; symptoms again recurred and were again controlled by medical measures. When last seen in 1940 this patient was still following management and was symptom-free.

PRESENT PROCEDURES USED IN MEDICAL MANAGEMENT

Jejunal ulcer is usually more intractable to medical management than the original peptic ulcer. There is a greater likelihood of complications, such as perforation, hemorrhage, or obstruction.

Hospitalization is important at the start of management. Daily observations aid in determining the type of treatment indicated in the individual case. If immediate surgery is not indicated, its need may become established later if the patient's response to medical management is not satisfactory. While the patient is in the hospital, gastric aspira-

tions can be made in order to determine the suitable dosage of antacid. The patient has complete physical rest; he is impressed with the seriousness of his disease; and he learns how to take care of himself. We agree with Jordan[2] who said, "there is very little danger of overtreatment and very great danger of undertreatment of this disease".

Recently our experience with the medical management of peptic ulcer and its complications has been reported.[3, 4, 5] The same principles are used in treating jejunal ulcer. At the present time we believe minimal requirements for adequate treatment include frequent feedings and antacid therapy, in addition to physical and mental rest, and consideration of the hygienic needs of the individual. We advise the use of milk or food at least once between meals during the remainder of the patient's life. During the first year's treatment the patient takes aluminum hydroxide gel at least 4 times daily, i.e. one hour after meals and at bedtime. If there is a history of seasonal recurrences, the patient is advised to use the feedings and antacid more frequently at these times each year for 5 years, even though no symptoms are present. The healing of any one peptic ulcer does not mean that the patient will not have another ulcer. The patient must realize that he has an ulcer diathesis and that continued supervision of his management is as important as it is in patients having diabetes mellitus or pulmonary tuberculosis.

Due to present crowded conditions the patient with jejunal ulcer may not remain in the hospital longer than one week, but a period of two weeks should be the minimal requirement. The diet has become more liberal. During the first week of treatment a bland diet is used at 8 a.m., 12 noon, and 6 p.m. A glassful of milk is taken at 10 a.m., 2, 4, and 8 p.m. Thereafter a well-balanced diet including meat and citrous fruit juices is gradually added, but the 2 hour schedule of milk between meals is continued at least during the first 6 week period of treatment. Care is taken to avoid seeds, skins, and coarse fibers. Adjustment of caloric intake and the use of supplemental vitamin therapy depend on individual needs.

Aluminum hydroxide gel (stirred in ½ glass of water) is taken an hour after each meal, one hour after feedings, and at bedtime. In other words, during the first period of treatment the patient eats breakfast at 8 a.m., takes the antacid at 9 a.m., milk or food the next hour, etc., so that every hour during waking hours he takes either food or antacid. In patients having evidence of continued night secretion the antacid is also given at 12 midnight and 3 a.m. during the first 1 or 2 weeks' treatment. The amount given depends on the gastric free acidity as determined by gastric aspirations, but it has not been less than 2

drachms per dose during the day time hours and 1 ounce during the evening and night hours. Our experience corresponds with that of Flexner and Kniazuk[6] in that the action of aluminum hydroxide gel is prolonged when large doses are given. Our aim is not to neutralize gastric acidity completely, but to keep the level of free acidity sufficiently low to prevent activation of pepsinogen. The beneficial effect of aluminum hydroxide may be due to several factors and not to its antacid properties alone. Schiffrin and Komarov[7] have shown that it will inactivate pepsin itself, even in the presence of acid. Sufficient liquid petrolatum, heavy magnesium oxide, or aromatic fluid extract of cascara sagrada is added to prevent constipation until the patient is including sufficient vegetables and fruit in his diet to assure proper bowel function.

Progress roentgen examinations and/or gastroscopic examinations are made at least once before the first 6 week period of treatment is completed. This aids in determining the frequency of feedings and antacid administration for the future. As already mentioned, the patient is advised to take milk or food at least once between meals and to use the antacid at least 4 times daily (usually ½ to 1 ounce dosage) during the first year of treatment.

COMMENT

The indications for surgery in peptic ulcer have become conservative in recent years. When surgery is used, radical gastric resections have been done more frequently. In spite of this, jejunal ulcers continue to develop. In former years the patient was lead to believe that he was "cured" after having had an operation, and so was free from all restrictions postoperatively. At the present time, in view of the well-known "ulcer diathesis" factor, we know that all patients in whom a diagnosis of peptic ulcer is established should modify their living habits for life, regardless of whether medical or surgical management is used.

The development of jejunal ulcer emphasizes the need for continued management after operation. We believe fewer jejunal ulcers would form if the patient would include milk or food at least once between meals, and use an antacid at least 4 times daily for a few months postoperatively, as well as at the times of his usual seasonal recurrences each year.

Too often frequent feedings and antacids are used only for the temporary relief of symptoms. In our experience an adequate program requires these procedures **regardless of the absence of symptoms.**

The clinician may believe medical management has been followed **without realizing that it has not been adequate.** To evaluate treat-

ment inquiry must be made regarding not only the **frequency** of feedings and antacids used each day, but also the **quantities** used.

SUMMARY

A series of 29 consecutive cases of jejunal ulcer has been briefly reviewed. Four patients had surgical treatment, there were no follow-up studies in 7 cases, but 18 patients are known to have continued with medical management alone.

This experience is in keeping with current trends in therapy and confirms the belief that unless the patient has obvious indications for immediate surgery, adequate medical management should be used before establishing the need for surgery.

In our experience medical management, including the use of aluminum hydroxide gel, may prove effective if the patient follows a well-ordered program over a long period of time.

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