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THE MEDICAL MANAGEMENT OF PEPTIC ULCER

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We still do not know why a portion of an apparently healthy mucosa of the stomach or duodenum becomes liable to digestion by its own juices. In the treatment of peptic ulcer our goal is still the reduction of the acidity of the gastric juice, so that peptic activity is inhibited or markedly reduced, and healing of the ulcer can take place.

The advent of suitable insoluble alkalis has been a great boon in the treatment of peptic ulcer. The insoluble alkalis do not produce undesirable side-effects, and when taken in adequate doses, and at very frequent intervals, they neutralize the acidity of the gastric juice sufficiently for healing of the ulcer to take place. Thanks to the introduction of the insoluble alkalis, the dietetic treatment of peptic ulcer has lost much of its austerity. The management of the ulcer patient has become simplified and many patients who in previous years were put to bed for many weeks can now carry on their vocations while they are undergoing treatment.

DIET

It is not necessary to make milk the basis of the dietetic treatment of peptic ulcer. The diet can be ample, varied and palatable. Tender meats, poultry, fish, soft raw fruit and soft boiled vegetables (not stringy) are allowed in addition to the bland foods which used to be given in the past (milk, cream, cheese, butter, bread, biscuits, fine cereals, stewed fruit and puddings). Condiments, fried foods, raw salads, fibrous fruits and vegetables are avoided.

There is no need for a 'stepping up' scheme whereby new items of foods are introduced at intervals. In most cases the full diet is given from the start. Only in cases with severe pain or gastric stasis, or immediately after a haemorrhage, is it necessary to exclude vegetables and raw fruits and to prepare the meat in minced form. Such limitations of diet need rarely last for more than 1-2 weeks.

Amount and frequency of meals. There need be no restrictions on the amount of food taken at each meal. Where it is desirable that the patient should gain weight, more food is given.

There is no necessity for very frequent feeds. The patient should have breakfast, lunch and supper at the usual times and, in addition, he should have tea or a milk drink and a snack in the mid-morning and afternoon and at bedtime.

Alcohol and smoking. Alcohol is not allowed in any form. Smoking is usually harmful and should be omitted or strictly curtailed. If, to relieve nervous tension, a few cigarettes are allowed, they should be smoked only after meals or teas.

DRUG TREATMENT

Alkalis. Theoretically, the ideal method of neutralizing the acidity of the gastric juice as rapidly as it is secreted is by some method of continuous administration of alkalis. Such a result can be obtained by the continuous intragastric drip of milk and alkalis. This is, however, a difficult procedure; it is cumbersome and unpleasant, it involves the patient in treatment in bed and, moreover, it has its own limitations. The frequent administration of insoluble alkalis achieves nearly the same purpose and, although it does not approach the ideal, yet in practice it approximates closely to the method of continuous neutralization. The results obtained by frequent administration of alkalis are excellent. It is, however, essential that the alkalis should be taken very frequently. A dose of one of the insoluble alkalis should be given every hour of the day and also if awake during the night. (The patient takes 16-18 doses of alkalis a day.) If pain is experienced, then extra alkali is taken immediately; the dose of alkali should then be 2-4 times the usual dose.

The two most suitable alkalis are (1) aluminium hydroxide, preferably as a gel in liquid form, and (2) magnesium trisilicate. When taken in large amounts, aluminium hydroxide is constipating and magnesium trisilicate may produce diarrhoea. More doses of one or the other can be taken during the day, depending on the state of the bowels. In the average case it has been found that the administration of alternate doses of the above two alkalis is a suitable arrangement.

Patients who are at work usually find it convenient to take the alkaline preparations in tablet form. The tablets are chewed and swallowed every hour. There are a variety of palatable tablets on the market which contain aluminium hydroxide and magnesium trisilicate.

Sedatives. The use of sedatives is most important in the treatment of patients with duodenal ulcers and is less important in gastric ulcers. Sufficient sedatives should be given to induce complete relaxation; the patient undergoing treatment at bed-rest should lose his alertness to the point of not even being interested in reading. The average patient treated at bed-rest requires phenobarbitone, gr. $\frac{1}{2}$ *t.d.s.* and gr. 1 at bedtime. In some cases, especially during the first few days, the night dose may have to be increased to produce adequate relaxation and sleep.

Patients who are ambulatory and who have to carry on

with their work can usually take phenobarbitone, gr. ¼ 3-4 times a day. If the patient feels unduly tired in the forenoon, then the morning dose can be omitted.

Belladonna inhibits the nervous phase of gastric secretion. A dose of 10 min. of belladonna tincture 3-4 times a day is well tolerated by most patients. It can be combined with the sedative in a mixture or a tablet.

The place of the new anticholinergic drugs in the treatment of peptic ulcer is still very much disputed. Some authorities have great faith in anticholinergic drugs and employ them enthusiastically, either together with alkalis or even to the exclusion of all alkalis. Others are not convinced of their superior efficacy; thus, Avery Jones[1] states: 'It is doubtful if the many anticholinergic drugs are of any more value than atropine.' In my own practice, I very rarely employ anticholinergic drugs in the treatment of peptic ulcer, since I have found that the administration of hourly alkalis, together with sedatives in adequate amounts and belladonna, leads to excellent results in most cases. On the regime described here most patients with peptic ulcer lose their symptoms within 3-4 days and they show healing at the usual times. I have found that the rapid remission of symptoms is such a constant feature with this form of treatment, that if a patient still complains after 3-4 days, then a search is made for some complicating factor.

Duration of Treatment

Bed-rest treatment is usually carried out for 3-4 weeks. Even when the ulcer has not completely healed by that time, it is generally not advisable to prolong bed-rest for more than a month because patients become restless and fidgety and start worrying—which itself may interfere with the therapeutic effort. Any further treatment can be carried out while the patient is ambulatory.

In ambulatory cases, the treatment is carried out for 1-2 months and consists of the diet already mentioned, stopping smoking and drinking (alcohol), and the administration of hourly alkalis, adequate sedatives, and belladonna. During the time of treatment work should be reduced to a minimum, rest increased to a maximum, and adequate hours of sleep ensured.

After-treatment

It is necessary to ensure, not only that the ulcer heals, but that it will not recur. The treatment does not stop after the few weeks rest in bed or the month or two on ambulatory treatment. In the after-treatment of ulcer, the following precautions have to be taken:

1. *Diet.* After a month or two on full treatment, the diet may be increased to include salads, fried foods and most ordinary foods except condiments and tough, indigestible foods. The patient should be instructed to eat regularly and not omit meals, and he should be very moderate in the use of alcohol and tobacco.

2. *Alkalis.* Hourly alkalis should be taken for at least a month, then the alkalis can be taken at 2-hourly intervals for a total of 3-6 months. At the end of that time alkalis may be discontinued, but in long-standing cases it is often advisable to prescribe a dose of alkalis 3 times a day after meals and a double dose at bedtime for long periods—if necessary for years.

3. *Sedation and belladonna* should be prescribed in adequate doses for 3-6 months. At the end of that time it may be advisable to prescribe a sedative, such as phenobarbitone, gr. ¼ 3 times a day, or gr. ½ at bedtime for long periods.

4. *Mental rest.* The doctor should utilize his period of contact with the patient to embark on a scheme of re-education of the patient. A radical change of the 'ulcer personality' would be the best insurance against ulcer recurrence. This is highly desirable, but in practice is not often achieved. With many patients, neither suggestion nor the superficial psychotherapy which the average physician is able to employ, is of much value in changing the attitude of the ulcer patient.

However, many patients can be persuaded to take certain practical steps, which, while not radically altering the 'ulcer personality', may yet result in the patient leading a life which makes him less tense and less fatigued, and therefore less liable to recurrence of his ulcer.

SPECIAL GUIDANCE

An ulcer patient should be given special guidance about his work, rest, sleep and holidays.

Work. Overstrain and overactivity are frequently encountered in patients with duodenal ulcer. The patient should be induced to cut down his work and responsibilities: overtime, evening work, week-end work and examinations should be stopped and the patient should be relieved of as much responsibility as possible.

Rest. The patient should take long periods for his meals. If possible he should lie down after lunch and on coming home in the evening. He should go to bed early once or twice a week, and stay in bed half a day during the week-end.

Sleep. Adequate sleep is important. It is often advisable to take a sedative at bedtime to ensure a long and restful period of sleep (about 8 hours).

Holidays. The patient should be encouraged to take frequent restful holidays.

Bed-rest and Ambulatory Treatment

The decision whether a patient can be adequately treated while he is ambulant or whether he has to be put to bed, depends on a number of factors. Most gastric-ulcer patients require bed-rest. In patients with duodenal ulcers the decision will depend upon the severity of the lesion. Patients with severe pain, especially those with frequent night pains and pain in the back, and patients who on X-ray investigation show the presence of a large ulcer, usually have to be put to bed. Recently, however, the tendency has been to treat fewer patients with bed-rest than formerly, and this is largely owing to the employment of frequent doses of the insoluble alkalis. In many cases one can institute a form of compromise treatment: The patient is allowed to carry on with his work, which is reduced to a minimum—all over-time and all avoidable work being stopped. The patient goes to bed when he comes home from work and stays in bed for the week-ends. This form of treatment may not meet the ideal requirements in some cases, but is of value in those patients who for some reason or another cannot stay in bed for the few weeks of treatment.

Differences in the Treatment of Gastric Ulcers and Duodenal Ulcers

Although gastric and duodenal ulcers have been considered together, there is a difference of emphasis in the treatment of the two conditions. Patients with gastric ulcer nearly always require a period of bed-rest for their treatment to be effective, dietary factors are more important in the treatment of this

condition, and it is advisable to omit coarse foods and alcohol and smoking for a longer period. In patients with duodenal ulcer, on the other hand, the indications for sedatives are much greater because these patients are often tense, they tend to worry and cannot relax easily. Physical factors such as diet are not as important as attention to the nervous element and to the employment of measures to combat gastric acidity.

The Treatment of Ulcer Patients who also Suffer from a Spastic Colon

A certain number of ulcer patients also have symptoms of the spastic-colon syndrome, such as lower abdominal pain, flatulence, constipation and diarrhoea. The treatment of such patients requires special consideration, since they usually do not tolerate large amounts of milk nor the administration of magnesium salts. In the dietetic treatment of such patients the intake of milk is reduced to a minimum and fried foods are avoided even at a later stage. The only alkali given is aluminium hydroxide, but in order to avoid its constipating effect, liquid paraffin or other mild purgatives are given. In many cases it is advisable to omit purgatives entirely and to give enemas every alternate day during the period when large doses of aluminium hydroxide are taken.

Complications of Peptic Ulcer

The treatment of complications of peptic ulcer is a subject which cannot be considered fully here. Perforation is an indication for immediate operation. Haemorrhage is an acute emergency which requires immediate and full blood transfusion and special treatment. Pyloric obstruction and hour-glass deformity nearly always necessitate operation, but it is advisable to treat the patient adequately before operation is undertaken.

Surgical Treatment

The operation of partial gastrectomy, which is the usual operation performed both for gastric and duodenal ulcers, has become a common and standardized procedure. With the availability of antibiotics, of the new anaesthetics, and the improved pre- and post-operative control of patients, the operation has become a routine and safe procedure. Most patients with gastric ulcer require surgery, but recent cases and those with small ulcers usually do very well on medical treatment. In patients with duodenal ulcers operation is indicated in cases of very long standing, after severe and repeated haemorrhages, in those who have undergone adequate medical therapy without relief, and in those who have developed complications.

REFERENCE

1. Jones, F. A. (1959): *Modern Trends in Gastro-enterology*, 2nd series, p. 194 London: Butterworth.