TREATMENT IN GENERAL PRACTICE

This article is one of a series on the management of some diseases of the digestive system met with in general practice.

THE MEDICAL TREATMENT OF PEPTIC ULCER

BY

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PART I

The medical treatment of peptic ulcer must needs be long. If the time necessary to secure the permanent healing of a callous ulcer of the leg is considered, it is obvious that a chronic ulcer placed in an actively moving part such as the wall of the stomach or duodenum, and frequently bathed by active digestive ferments, must be a difficult lesion to heal firmly and permanently. When it is also remembered that a peptic ulcer is often present and active without causing any symptoms at all—and, particularly, that a few days of strict treatment will sometimes remove all symptoms—it will be realized that permanent healing requires the collaboration of patient and doctor during a long period, during which neither pain nor discomfort may remind the patient of the necessity for being careful. If only ulcers of the stomach and duodenum remained painful or uncomfortable until they were properly healed, there would be far fewer relapses than occur at present. As it is, it may be said that the medical treatment of peptic ulcer, properly applied over a sufficient period, is extremely satisfactory in all but a small percentage of cases.

From time to time new medical treatments for peptic ulcer appear, the last two to have received much attention being the mucin treatment and the histidine treatment. In this article, however, I will deal with the orthodox lines of medical treatment, which in the hands of many physicians in many countries have yielded excellent results in a high proportion of cases during the last twenty years.

Selection of Cases for Surgical Treatment

There are some cases which from the outset give evidence either that medical treatment will fail or that surgery offers a quicker and simpler road to permanent recovery. Among them the following may be cited:

1. Those in which perforation has occurred.
2. Those in which there has been severe or recurrent dangerous haemorrhage.
3. Those in which cicatricial contraction has caused, or will soon cause, permanent pyloric stenosis, or serious hour-glass constriction of the stomach.
4. Those in which *x-ray* examination shows deep ulceration with adhesions to neighbouring structures.
5. Those with a short history or other features pointing to the possibility of malignancy.
6. Those which continue to relapse in spite of efficient medical treatment.
7. Those whose economic position makes effective medical treatment impossible.

Except in the event of perforation, it is possible to argue that surgical treatment is not a necessity in any of the conditions laid down above, and medical treatment, as an alternative to surgery, in these groups will be

discussed later. All that is for the moment implied is that in such cases I believe that surgical treatment will yield a higher percentage of good results than will medical treatment.

Medical treatment having been decided upon, the nature of it will be determined by the condition of the patient and the results of *x-ray* examination. If haematemesis or melaena is present there is immediate indication for departure from the ordinary lines of treatment; they will be dealt with in a separate article. But apart from bleeding certain symptoms must exercise a decisive effect on the choice of initial treatment, and of these symptoms pain and vomiting are the more important.

When Pain is Prominent

Severe pain in a case of peptic ulcer indicates that ulceration is very active; but admittedly this conclusion cannot be supported by direct evidence. The mechanism of the pain of peptic ulceration is obscure; it is probably due more to spasm than to the activity of the ulcer. It is a fact, however, that bad pain usually occurs at times when ulceration is very active, and that it is rare for pain to be pronounced at times when an ulcer is quiescent or healing. *X-ray examination should never be undertaken during the earliest stages of treatment if pain is present.* In the interests of the patient it is necessary to impose a strict regime until such time as pain has disappeared rather than to subject him to the risks of perforation and haemorrhage through the desire for more exact knowledge during this period.

The orthodox and logical treatment of peptic ulcer is to place the patient in such circumstances that the ulcer is as far as possible at rest, and as far as possible freed from the irritation of corrosive gastric juice. On an ordinary diet the normal stomach contracts some 6,000 times daily; by giving small fluid feeds these contractions are reduced by perhaps 80 per cent.; by keeping the patient in bed the normal requirements of the body as regards food are reduced to a minimum. Treatment with frequent small fluid feeds and rest in bed are therefore essential at the outset in cases of painful peptic ulceration. Pure gastric juice contains nearly 0.4 per cent. of free hydrochloric acid, and this, especially when containing pepsin, constitutes a corrosive fluid calculated grossly to impair the healing of an ulcer. This corrosive action can be minimized by reducing the amount of active gastric juice secreted, by diluting the gastric juice when secreted, or by neutralizing it with alkalis. For this reason the treatment of peptic ulcer includes the administration of fluid foods, such as milk, containing buffer substances, which will adsorb acid, and the administration of mild alkalis, which will neutralize the hydrochloric acid.

Treatment at the outset in a case of gastric or duodenal ulcer in which pain is prominent should therefore be carried out with the patient in bed. Hourly feeds not exceeding three to four ounces should be given, and may be selected from the following list:

Citrated milk. Egg and milk. Milk flavoured with coffee. Arrowroot. Benger's food. Allenburys food. Ovaltine. Glaxo. Strained milky vegetable soups.

The last form an agreeable change from the usual milky substances, and it is important that the nature of the feed should be changed from hour to hour in order that the patient may not get too tired of any one food. Junket and ice-cream are also permissible even at this early stage.

Belladonna is a very valuable drug for diminishing gastric secretion, but unless given when the stomach is empty it will act only after absorption, and the doses necessary to diminish secretion are then such that unpleasant symptoms may occur, such as dilatation of the pupil. For this reason the administration of belladonna should be in the form of 5 to 7 minims of the tincture in an ounce of water, to be taken when the patient first wakes in the morning; it should not be repeated. During the remainder of the day alkali should be prescribed, but if given after every feed the total amount may be sufficient to cause diarrhoea; it should therefore be taken half an hour after every other feed. The following is the prescription which I have found to be most practicable:

R. Mag. carb. pond. ... one part
Mag. carb. lev. ... two parts
Cretae prep. ... three parts

A small teaspoonful to be taken in water half an hour after every other feed.

If pain is at all severe there is no reason, in the absence of any suspicion of perforation, for withholding opium in some form; and it is indeed advisable to prescribe a mild opiate, because this drug has the advantage of diminishing secretion, although it is not the substance of choice unless pain is present:

R. Tinct. chlorof. et morph. co. ... m vij
Aquam ... ad. 3 ss

A tablespoonful six-hourly if pain is severe.

After three or four days of treatment on these lines pain has usually disappeared or become much less conspicuous. The opium derivatives should then be omitted, and several of the hourly feeds may be left out, with simultaneous increase of the remaining feeds to 5 or 6 oz. In this manner, at the end of seven to ten days the patient should be taking 6-oz. milky feeds every two hours, with a dose of alkali one hour after each feed from 8 in the morning until 8 in the evening.

The Second Stage of Treatment

The patient may now be said to have reached the second stage of treatment, by which is meant that pain has practically disappeared, adverse symptoms such as vomiting and bleeding (strong positive tests for occult blood) are absent, and there is reason to suppose that the ulcer is beginning to heal. The patient is taking two-hourly feeds, and small amounts of food may be added to those feeds which more or less correspond to normal meal times. It is a great mistake to work by a fixed diet sheet, because there is so much individual variation between patients, and a new diet sheet usually represents too great an increase from the previous one. Instead, a list should be made showing the total amounts that can be added during this second phase of treatment, the following being an example of such a list.

Thin, crisp, "oven" toast with butter. Breakfast biscuits or rusks with butter. Honey or red currant jelly. Soft milk puddings, such as rice, tapioca, etc. Two lightly poached or scrambled eggs. Junket, baked custard, ice-cream, stewed apple pulp with whipped cream.

An item or two from this list should be added every two or three days, particularly at breakfast time, lunch time, and supper time. No attempt should be made to advance too quickly, but all the time the patient should

be encouraged to realize that steady progress is being maintained. In this way, at the end of about fifteen days, the average patient is following a regime approximately as follows.

8 a.m.—Belladonna.

9 a.m.—One poached egg. Two pieces of thin toast, with butter and a little honey. One cup of milky coffee.

10 a.m.—Alkaline powder.

11 a.m.—Horlick's, Ovaltine, or milky coffee with a little cream.

12 noon.—Alkaline powder.

1 p.m.—8 oz. of strained vegetable soup with crisp toast. 3 oz. of milk pudding.

2.30 p.m.—Alkaline powder.

4 p.m.—Two cups of tea with milk and sugar. One rusk with butter and honey.

5 p.m.—Alkaline powder.

6.30 p.m.—One scrambled egg. Two pieces of thin crisp toast and butter. Ice-cream.

7.30 p.m.—Alkaline powder.

9 p.m.—Glass of hot milk or ovaltine.

10 p.m.—Alkaline powder if awake.

At this stage the patient should be getting up daily, but not going out of his house.

Final Stage of Treatment

The average course of treatment in uncomplicated cases should include about three weeks' strict treatment at home, three weeks' "convalescent" treatment, and three further weeks during which the patient is doing light work before resuming full work on a well-regulated diet.

When the final stage of treatment is reached it is essential to make a close study of the normal habits of each patient. It is absurd to lay down the same laws for the bank clerk, the labourer, the actor, the professional footballer, the market gardener, and the society woman. Obviously the hours of activity and the food requirements of these people will vary enormously. I am, however, convinced from experience that two factors are of predominant importance in deciding success in the treatment of all these cases. The first is the time of meals and the second the physical quality of the food. As regards the time of meals, these must be so spaced that the stomach is never very full and never empty of everything save corrosive gastric juice. In all classes of patients an attempt should be made to secure three light main meals a day, with a snack in the middle of the morning, between lunch and dinner, and in the late evening.

As to the nature of the food it must clearly contain the essentials for proper nutrition—that is to say, adequate amounts of carbohydrate, protein, and fat, with salts, vitamins, etc.; but these must be selected from those foods which call for minimum work on the part of the stomach. Fluid foods of high nutritive value are the best of all, and a milk basis here becomes almost essential. There are few walks of life in which it is impossible to obtain a cup of milk, milky coffee, or some similar beverage in the middle of the morning and at tea time. When the gravity of the situation is explained to them, I have found that patients with such varied occupations as those of a Covent Garden porter, a busy practising barrister, a music-hall artist, and a hard-working medical practitioner, were all able, sometimes with the help of a vacuum flask, to take the necessary intermediate snacks without interrupting their work. The main meals present no greater difficulties. The wife or husband of the patient is here the best assistant of the physician, and must be asked to collaborate in securing the proper meals. It has been said that the physical quality of the food is the all-important factor, and it is my custom to lay down that any food which will go into semi-solution in a few minutes if placed in a glass of water, or any food which can easily be crushed through a coarse sieve, is suitable in the diet of a patient with gastric or duodenal ulcer.

The transition from the second to the final stage of treatment must again be gradual, so that four weeks after the beginning of all treatment the patient is following a regime somewhat as follows:

8 a.m.—Belladonna.

8.30–9.30. a.m.—One egg, and two very thin crisp rashers of bacon. Three pieces of thin crisp toast or three breakfast biscuits, with butter, honey, or red currant jelly. Two cups of milky coffee or tea.

10 a.m.—Alkaline powder.

11 a.m.—Milk or milky coffee.

12 noon.—Alkaline powder.

1 p.m.—4 oz. of boiled or steamed fish. 3 oz. of well-mashed milky potato. Milk pudding, junket, baked custard, or stewed apple with cream.

2.30 p.m.—Alkaline powder.

4.30 p.m.—Two cups of tea with milk and sugar. One slice of sponge cake.

5.30 p.m.—Alkaline powder.

7–7.30 p.m.—Omelette or minced chicken. Mashed turnips, purée of peas, vegetable marrow, or well-mashed milky potato. Sweets at lunch (1 p.m.).

8.30 p.m.—Alkaline powder.

10 p.m.—Hot milk or ovaltine.

10.30 p.m.—Alkaline powder.

The above regime may be gradually varied by allowing soft foods such as lightly cooked liver or boiled chicken, a grilled cutlet, etc., to be taken occasionally as a substitute for fish. Indeed, a little ingenuity will permit the selection of an entirely palatable and adequate diet provided that the rules as to the consistency and mechanical qualities of the food are always remembered. A close study of the patient's personal habits and occupation must be made in order that the hours of meals may be adjusted to suit him. It is usually necessary to see such patients after they have been back at work for some weeks or months in order to be sure that they are being reasonable as regards the hours of meals and the quality of their food.

Alcohol, Tobacco, and Forbidden Foods

Much has been written about the deleterious effect of alcohol and tobacco in cases of peptic ulceration. There is no evidence that alcohol should be prohibited provided that moderation is strictly observed. My custom is to prohibit the taking of either very large drinks or very strong drinks; the bulk of the former is as risky as the strength of the latter. Patients should be informed that one of the risks of alcohol is that, taken before meals, it tends to induce an exaggerated appetite and to cause temptation to exceed reason in the amount of food subsequently eaten. Tobacco is undoubtedly deleterious to anyone with a tendency to peptic ulcer, but so many cases are met with in patients who have never smoked in their lives that it is absurd to say that it is more than an accessory factor. I usually ask patients to give up smoking altogether, and warn them that if they cannot do this they must remember that anything beyond strict moderation is dangerous.

A list of forbidden foods has the disadvantage of making some people think that anything that is not on the list is all right. The patient should therefore be warned that such a list cannot be inclusive, but merely contains the most dangerous foods. An appropriate list is as follows:

1. All hard raw fruits and vegetables such as nuts, apples, pineapples, pears, lettuce, cucumber, celery, and tomatoes.

2. All really tough or hard cooked fruits and vegetables such as cabbage, carrots, unmashed turnips, new potatoes, stewed pears, pickles.

3. Tough meat, poultry, game, or fish.

4. The less digestible starchy foods such as pastry, fruit cake, new bread, suet puddings, etc.

5. Jams, etc., containing pips and skins. Currants, raisins, and figs.

6. Strong condiments such as vinegar, mustard, curry powder, and chutney.

7. Cheese, with the exception of the lightest forms of cream cheese.

BLOOD TRANSFUSION IN PRIVATE PRACTICE

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Each hospital in this country has its own tried and trusted method for performing blood transfusion, and team work shared by the operator, the pathologist, and a specially trained nursing staff is the keynote to success. In private practice success lies in simplicity, so I have written this article to bring to notice a method which fulfils that purpose.

Technique of Blood Grouping

The materials required are: two haemocytometer pipettes; stock sera 2 and 3; a pencil microscope; 1-oz. bottle of 3.8 per cent. citrate solution; 1-oz. bottle of 0.9 per cent. saline solution; glass slides; platinum loop; small test tube; and a Hagedorn needle.

On arrival at the patient's home three glass slides are warmed under hot water and cleaned. One drop of serum 2 is added to the left half of the slides A and B, and one drop of serum 3 to each right half. Eight drops of 0.9 per cent. saline and one drop of 3.8 per cent. citrate solution are placed in the small test tube. A donor is selected from the assembled relatives, the ear

FIG. 1.

pricked, and blood drawn up in the haemocytometer pipette to the mark 1, and diluted to 1 in 100 by drawing up 0.9 per cent. saline to fill the bulb. At the same time one drop of blood is added to the solution in the test tube. The patient's ear is then pricked and the blood diluted to 1 in 100 in the other pipette and one drop of pure blood placed on slide C. One drop of the patient's blood solution is added to serum 2 and 3 on slide A. One drop of the donor's blood solution is added to serum 2 and 3 on slide B. One drop of the test tube solution is added to the drop of blood on slide C. (Fig. 1.) The pencil microscope (Fig. 2) is now applied. It is a

FIG. 2.

light instrument, which can be carried in the vest pocket, and is capable of 120 magnifications. Blood cells are easily seen by resting the microscope on the glass slide and applying reflected light through a white cardboard box 3 by 3 by 2 inches, with the aid of a pocket torch. Slide A is examined for agglutination, then slide B, and finally slide C. The results are as follows:

- Serum 2 agglutinated and serum 3 not agglutinated = Group 3.
- Serum 2 not agglutinated and serum 3 agglutinated = Group 2.
- Serum 2 not agglutinated and serum 3 not agglutinated = Group 4.
- Serum 2 agglutinated and serum 3 agglutinated = Group 1.