A CLINICAL LECTURE ON ULCERATION OF THE STOMACH.

WITH
SPECIAL REFERENCE TO THE STATISTICS OF
THIRTY-FIVE CONSECUTIVE CASES.

Delivered in the Western Infirmary, Glasgow.

By MCCALL ANDERSON, M.D.,

Professor of Clinical Medicine in the University of Glasgow.

GENTLEMEN,—Having brought under your notice several cases of ulceration of the stomach, I now propose to direct your attention to the results of an analysis of 35 consecutive cases.¹

The first point to be noted is the frequency of the affection as met with in hospital practice. I find that 2,538 medical cases yielded 35 illustrations of gastric ulcer, or nearly 1 in 73, that is, about 1½ per cent.

The Sex of the Patient.—It is well known that the disease is much more frequent in females than in males, but there is some difference of opinion as to the proportionate excess of female cases. Ziemssen tells us that the journals of the Pathologico-Anatomical Institution in Erlangen show that of 53 cases in which ulcers or cicatrices were discovered on *post-mortem* examination, 35 were in females and 15 in males, while Brinton gives the proportion as 2 to 1. This estimate, however, like Ziemssen's, is based on fatal cases, which may partly account for the widely different result brought out by my statistics. These show that of 35 cases, 32 occurred in females and only 3 in males. And this disproportion is all the more striking when I mention the fact that the former occurred among 927 female medical cases, the latter among 1,611 males, that is to say, that in males gastric ulcer was met with once in 537, and, in females, once in 29 medical cases.

The Age of the Patients.—Let us hear what Brinton says: "The liability of an individual to become the subject of gastric ulcer gradually rises from what is nearly a zero at the age of 10 to a high rate, which it maintains through the period of middle life, at the end of which period it again ascends, to reach its maximum at the extreme age of 90. We may therefore conclude that ulcer of the stomach is especially, though not exclusively, a disease of middle and advancing life."² This opinion is not at all in accordance with my own general experience, nor with the present statistics, which, in the main, support the view of Ziemssen, that ulceration of the stomach is specially a disease of adolescence and of middle age. The following table gives the ages of the patients at the date of their admission into hospital:

Males			Years.	Females (contd.)			Years.
...	...	1	27	...	...	4	28
...	...	1	32	...	...	1	30
...	...	1	45	...	...	1	31
Females	...	1	15	...	...	1	32
...	...	3	17	...	...	2	35
...	...	4	18	...	...	1	36
...	...	1	20	...	...	1	37
...	...	3	21	...	...	1	39
...	...	1	24	...	...	2	45
...	...	1	25	...	...	1	60
...	...	2	26	...	...	—	—
...	...	1	27	...	...	35	—

From the above it will be seen that none of the males were above 45, while, of the females, 16, or one-half, were between 15 and 26 years, 15 between 27 and 45, and 1 at 60. These figures confirm the impression which I have long had, that gastric ulcer is, *par excellence*, a disease of adolescence and of middle life, and that the earlier in life the disease appears, the more likely is the patient to be a female.

The duration of the symptoms at the time of admission into hospital is shown in the following table:

¹ These statistics were kindly collected from the ward journals by my Resident Assistant, Mr. Robert Anderson, M.B., C.M.

² *Lectures on the Diseases of the Stomach*, by Wm. Brinton, M.D. London: Churchill and Sons, 1864.

Males, 1 case, was of 2½ months' duration

" 1 " " 4 " "

" 1 " " 2½ years' " "

In the females the duration was stated in all but two cases.

In 2 it was of 2 weeks' duration

" 1 " 3 " "

" 4 " 1 month's " "

" 1 " 1½ " " "

" 3 " 2 months' " "

" 1 " 2½ " " "

" 3 " 3 " " "

" 3 " 4 " " "

" 4 " 5 " " "

" 1 " 7½ " " "

" 1 " 10 " " "

" 2 " 1 year's " "

" 2 " 2 years' " "

" 2 " 3 " " "

30

These statistics show that in 22 of the 30 female cases the duration of the disease was not more than five months, and bear out my previous impression that ulceration of the stomach is a more chronic affection in males than in females.

The following table gives the proportion of previous attacks:

Males.—One was attacked for the first time; 1 had 4 previous attacks during 2 years; 1 had repeated attacks during 5 years.

Females.—Of 26 cases in which this point was specially mentioned, 15 were attacked for the first time, and 11 had had previous attacks. Of the latter, 6 had one previous attack, the interval varying from 1 to 9 years; 4 had two previous attacks at intervals of from 5 weeks to two years; while 1 had had hæmatemesis repeatedly during the previous 12 years. So that these statistics bear out the character of this as a relapsing disease.

We now pass on to the statistics bearing upon symptomatology, which we shall consider upon the five following heads: 1. Appetite. 2. Pain. 3. Vomiting. 4. Hæmatemesis. 5. State of bowels.

1. *Appetite.*—This was specially mentioned in 18 cases; in 8 it was good, in 2 indifferent, and in 8 it was said to be bad; but this last statement must be taken with a reservation, because patients often say that they have no appetite, while they mean that they are afraid to eat on account of the pain which follows the taking of food.

2. *Pain.*—*a. The Character of the Pain.* In 21 cases this was specially referred to. In 6 cases it was described as burning, in the same number as gnawing; in 2 each, as shooting, cutting, dragging, and dull; while in 1 it was said to be "sharp." This bears out the general experience that burning or gnawing pain is most characteristic of ulceration. *b. The Time of Onset of the Pain.* This was specially noted in 21 cases. In 10 it came on immediately after food was taken, in 3 soon after food, in 3 within a quarter of an hour, in 3 in half an hour, in 1 in from half an hour to an hour, and in 1 an hour elapsed before its onset, thus bearing out the general experience that pain usually comes on soon after food is taken. The pain usually continued for two or three hours, or until the patient vomited, which he generally did within half an hour of the onset of the pain. *c. Tenderness.* Of 26 cases in which this symptom was alluded to, in 4 it was absent, and in 22 present. In most of these it was localised, and the tender part was indicated by placing the point of the forefinger on the epigastrium, a little below the ensiform cartilage; in 1 case, however, it was widely diffused; in 2 cases only was tenderness discovered over or near the lower dorsal spines (Cruveilhier's symptom).

3. *Vomiting.*—This feature was specially alluded to in 32 cases; in 2 there was none, in 4 it was occasional, in 4 it always occurred after food, and in 22 it was frequent, so that vomiting is one of the most constant symptoms of ulceration.

4. *Hæmatemesis.*—This symptom was referred to in 30 cases; in 6 it was absent, in 14 it was scanty ("coffee ground" vomiting), in 4 it was moderate in amount, while in 6 it occurred to the extent of a breakfast cupful to a pint or more. My own general experience led me to anticipate that these statistics would have shown a greater proportion of cases of large hæmorrhages.

5. *State of the Bowels.*—This was mentioned in 25 cases; in 1 the bowels were regular, in 1 irregular, and in 23 costive.

In 15 cases melæna was noted; in 1 case it occurred only once,

in most cases it was observed repeatedly, and in 1 it was almost continuously present for 3 months; in 14 cases there was hæmatemesis without any mention of melæna, and in 3 melæna was present without hæmatemesis, thus showing the importance of a careful and continuous inspection of the motions in every suspected case of ulceration.

Complications.—In 15 cases the ulceration of the stomach was primary and uncomplicated, while in 20 there were complications. One patient was suffering from abdominal aneurysm; 1 was hemiplegic, 2 had bronchitis, and 1 of these had pleurisy in addition; 2 were scrofulous, 7 were anæmic, and 7 were chlorotic. I believe that several of those described in the reports as anæmic were really chlorotic, but, at any rate, the statistics show that, in women, chlorosis is a very common accompaniment of ulceration. This fact must be carefully kept in view, else the pain of the ulceration may be mistaken for neuralgia of the stomach, which is so frequently met with in chlorosis, all the more as these are the very cases which are most apt to terminate fatally by perforation.

Results.—Of the 35 cases 2 only remained for a week or two in hospital, and 1 insisted on leaving on the twenty-fifth day, being "much improved." One patient was "improved" when dismissed, 7 were "much improved," and 23 were cured. Only 1 patient, a male, died, as the result of hæmorrhage from the stomach and bowels, and on *post-mortem* examination an ulcer was found at the pylorus, which had perforated a large vessel. These results correspond pretty closely with the result of Brinton's observations, which show 1 death in 20 to 30 cases, males succumbing to the disease nearly four times as often as females.

Treatment.—Having recently directed your attention to the treatment of ulceration of the stomach in connection with cases in the wards, it is only necessary now to indicate briefly the lines which were followed in connection with the cases comprised in the foregoing tables. 1. The patients were always strictly confined to bed—a point which, I have reason to believe, is not always insisted upon, as not only does the ulceration heal more readily, but the danger of profuse hæmorrhage and perforation is lessened. 2. The dieting was generally the main point in the treatment. Hard, hot, stimulating, and irritating food was rigidly excluded: soft and fluid food, in small quantities, frequently repeated, being the rule; and, in the majority of cases, unless there was some contraindication, milk, in combination with a little potash or lime water, was prescribed. In some instances peptonised meat preparations were given, especially Carnrick's beef peptonoids, to the extent of a teaspoonful every four hours. The patient was directed to suck the powder, so as to mix it thoroughly with the saliva before swallowing it. In some instances a slight modification of Debove's meals was administered. This consists of 25 grammes of Carnrick's beef peptonoids, 1 gramme of burnt magnesia, 2 of prepared chalk, and 1 of saccharated lime. The gastric juice is thus neutralised, and no peptones are formed in the stomach. It was found, however, that three of these meals per day sometimes produced diarrhoea, so that latterly three half meals were prescribed. As to the quantity of soft or fluid food given at a time, two ounces was the usual allowance at first, but the quantity was diminished if pain or vomiting resulted, and, of course, the less food that was taken the oftener was it repeated. We always adhered strictly to the rule of gradually reducing the quantity administered at one time, until it produced neither pain nor vomiting; and if even a teaspoonful of milk disagreed, all food by the mouth was suspended for a time, and the patient was fed exclusively by the rectum, although he was allowed to suck a small piece of ice occasionally. The rectal feeding usually consisted of the introduction every four hours of a zymised milk or meat suppository, and on the alternate four hours an enema, consisting of 3 drachms of Carnrick's beef peptonoids mixed with 2 or 3 ounces of warm water, was given.

A cure often resulted from dieting and rest alone, but the bowels were regulated when necessary by enemata, or the injection of a drachm of glycerine into the rectum. In a good many cases Carlsbad salts (the artificial salts by preference when constipation was present), as recommended by Ziemssen, sometimes yielded excellent results. These are given on the principle that the most essential obstacle to the formation of granulations in the floor of the ulcer is the corrosive influence of the gastric juice. The salts neutralise the acids and check fermentation; they likewise discharge the fermenting liquids into the bowel, and act as an aperient. The dose is from 1 to 4 drachms dissolved in a pint of boiling water. This is allowed to cool, and when tepid is slowly

drunk to the extent of a quarter of pint every ten minutes until it is all swallowed, and is given in the morning.

During convalescence the diet was very slowly improved, and sometimes small doses of arsenic in the shape of Schieffelin's pills (gr. $\frac{1}{8}$ to gr. $\frac{1}{4}$), thrice daily, seemed to consolidate the cure.

In some cases, when pain was a prominent feature, and especially when it persisted when the stomach was empty, opiates in small doses, or a combination of hydrocyanic acid and bismuth, were administered. When hæmorrhage occurred to any extent rectal feeding was resorted to; although the patient was allowed to suck ice; ice was applied in an ice bag to the epigastrium, and morphine was given by subcutaneous injection, and occasionally ergotine. Finally complications were dealt with on general principles, according to their nature—chlorosis, the most frequent one, being treated with Schieffelin's Bland's pills.

REMARKS

ON THE TUBERCULOUS NATURE OF THE SO-CALLED SIMPLE PLEURITIC EFFUSION.¹

By ALFRED G. BARRS, M.D., M.R.C.P.,

Senior Assistant-Physician to the General Infirmary at Leeds; Lecturer on Materia Medica in the Yorkshire College of the Victoria University.

THE observations I am about to make are the outcome of an inquiry in which I have been engaged from time to time during the last year and a half for the purpose of ascertaining the remoter event in cases of pleuritic effusion.

I have taken from the hospital records, for the years 1880 to 1884 inclusive, the names and addresses of all the cases of simple pleuritic effusion, purulent or non-purulent, and have ascertained by such means as were at my disposal if they were still living, and if so, in what condition, and if they were dead I have, so far as possible, ascertained the cause of death, sometimes from the medical attendant, sometimes by an inspection of the death register of the district in which the patient had lived. No case has been inquired into in which there was any reasonable doubt as to the presence of fluid in the pleural cavity, or in which the effusion could be regarded as in any sense of secondary origin in the ordinary acceptation of the term. So that we have not to consider any case of pleuritic effusion which was secondary to any recognised pulmonary lesion, such as phthisis or acute pneumonia, both of which are, in my experience, extremely rarely complicated by fluid effusions into the pleural cavity, or secondary to cardiac or renal disease. We are, in short, concerned only with those cases which appear to be spontaneous, and which are usually said to arise from exposure to cold. The undertaking has been a somewhat laborious one, and it was originally my intention to have placed the results of it before the Section of Medicine of the British Medical Association at its meeting in Leeds in August last, but my duties in connection with that meeting made it impossible for me to do so.

I may state at once that the point I have had in view throughout has been to ascertain the relation of pleuritic effusion to pulmonary phthisis or other tuberculous manifestation, and so to a tuberculous pleuritis, for I see no reason to doubt that if a pleuritic effusion is followed by phthisis, the effusion itself was in the first instance of a tuberculous origin. I cannot better define my own position than by quoting a few short remarks made in a debate on this subject by Dr. F. C. Shattuck, of the Massachusetts General Hospital, in the early part of 1888: Dr. Shattuck² then said that "about three years ago he had written a note to Strümpell's *Textbook of Medicine* to the effect that the experience of physicians in America was not like that of the Germans, who, according to Strümpell, found pleurisy due to cold only in very rare instances. He had given as his reason for the statement that in America so many patients with pleurisy entirely recovered. Since then his views had undergone a marked change. Facts

¹ Read before the Leeds and West-Riding Medico-Chirurgical Society.

² *New York Medical Journal*, July 14th, 1888, p. 43.