Clinical Lecture

ON

CHRONIC ULCER OF THE STOMACH.¹

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GENTLEMEN,—During the last five years I have had a number of cases of ulcer of the stomach under my care, whose progress has been so uniformly satisfactory that I desire to draw your attention to the treatment employed. By ulcer of the stomach I mean the round, perforating, simple ulcer which alone has gained the distinction of a separate place in clinical medicine. It is a disease which occurs most frequently in young women, and the series of cases taken from my hospital note-books for the last four years and a half consists, with one exception, of this class:—

No.	Name.	Age.	Occupation.	Duration.	Result.
1	Caroline H.	28	Jeweller.	4 years.	Cured.
2	Eliza H.	20	Penworker.	5 weeks.	"
3	Emily A.	38	Housewife.	6 months.	"
4	Ellen R.	20	Penworker.	2 years.	"
5	Annie S.	20	Clerk.	13 months.	"
6	Laura H.	22	Schoolmistress.	2½ "	"
7	Emily W.	27	Cook.	6 "	"
8	Florence T.	24	Penworker.	2 "	"
9	Emma H.	32	Housewife.	1 year.	"
10	Frederick H.	20	Gun-finisher.	3 years.	"
11	Annie H.	32	Cook.	14 days.	"

Thus there are ten females to one male, a much greater proportion than that given by Dr. Wilson Fox² (two to one). The first case on the list was in the hospital three times before she was finally cured, and Case 4 was in on two occasions, but in both these instances the symptoms had been of long duration before coming under treatment: one year in the first case and two years in the other. The prevalence of the disease amongst cooks has been repeatedly remarked, and in our little series this occupation has two representatives. It will be noticed that three of the girls were penworkers, but this is perhaps attributable to the neighbourhood of several large pen factories. The disease is one which may last many years, and it is quite possible that some of these cases may relapse. I show you here a museum specimen of ulcer of the stomach. The breach of surface is usually about the size of a shilling, with clean-cut edges, as if punched out, but funnel-shaped—that is, wider in the mucous coat than in the submucosa and muscularis. The edges are smooth and destitute of any sign of granulations. It is generally believed that the ulcer is due to thrombosis of a limited vascular area with secondary necrosis and digestion of the dead part by the action of the gastric juice. It is supposed that thrombosis occurs as a result of the state of the blood—e.g., in anæmia,—as the experiments of Silbermann have shown that gastric ulcers may be produced in animals rendered anæmic by artificial means. But it is also thought that localised inflammations may so destroy the vitality of parts of the mucous membrane that the same result follows, and the frequency of the occurrence of the disease in cooks has been attributed to their habit of tasting very hot portions of food. Mechanical injuries to the mucous membrane of the stomach of animals are followed by circumscribed ulcers. Another factor upon which much stress has been laid is excessive acidity of the gastric juice, but it has been pointed out that this is quite as likely to be a consequence as a cause of the ulcer. Tubercle appears to give rise to ulcers quite undistinguishable at least to the naked eye from the simple form. The most important clinical fact is that these patients are generally anæmic and ill-nourished, and this is of great importance when we come to consider the treatment, for the starving method now in vogue is calculated to

maintain this unfavourable state of things; while I attribute the success I have met with to the energy with which I have endeavoured to remedy these conditions. Before proceeding to detail the symptoms of this disease I will read you the account of one of the last cases under treatment.

CASE 1. *Gastric ulcer, history of one year's duration with pain, vomiting, and hæmatemesis.*—Emma H—, thirty-two, laundress, was admitted into hospital on June 29th, 1889, complaining of pain in the right hypochondrium and below the left breast, of sickness and hæmatemesis, with cough and shortness of breath.

Family history.—Her father was ill with some chronic affection of the liver, suggesting malignant disease, and her mother had a cancer(?) of the breast. One brother was "consumptive," two were in good health, and one had died aged nine weeks of some wasting disease. A sister had died of consumption, three others were in good health, and one had undergone an operation, probably the removal of an ovarian cyst, at the hands of Mr. Lawson Tait.

Previous history.—She said she had never been strong. No history of acute rheumatism. Had had a bad attack of measles two years previously to admission. Had scarlatina when fifteen years of age. For the last two years had been short of breath on exertion. She had been married thirteen years, and had had three children, one of whom died at the age of two, having never been able to walk. From the age of nineteen to twenty-two she suffered from "fits," which she attributed to a fright. She had an enlarged thyroid, which used to get bigger at her monthly periods, but she did not think it had increased lately. For the last year she had not menstruated.

History of present illness.—About a year ago she had noticed a swelling on the right side of the abdomen, which caused her pain on sitting. One day she was seized with a sudden pain in the abdomen, and fainted. A doctor was sent for, and on recovery she was told that she had passed about a quart of blood from the bowel. The pain in the tumour continued, and a fortnight later she vomited blood, as much as a pint on one occasion and half a pint on another. For several months before this she had been sick at times. This occurred ten weeks before admission, and since that time she had vomited blood two or three times a week, and food continually.

Present condition.—She was a thin woman, with a fair amount of colour from dilated capillaries in the skin of the cheeks. She said she had been much stouter up to six months ago. Temperature 98.5°.

Alimentary system.—Teeth defective, more than half their number having disappeared. Tongue pale, flabby, with irregularly distributed fur on the dorsum. Appetite poor. Complained of pain in the right iliac region, which prevented her lying on that side. Pain after food, coming on at once, and lasting about an hour. Tenderness general over the abdomen, but most marked in the right iliac region and under the left breast. Vomiting not constant. No obvious dilatation of stomach. Bowels regular of late. Liver dulness in vertical nipple line two inches. No tumour to be felt anywhere in abdomen.

Circulatory system.—Impulse heaving, no thrill. Apex beat diffused, area of cardiac dulness limited by vertical nipple line to the left; a booming systolic murmur at the apex conducted into the axilla, with accentuation of the pulmonary second sound. Occasional palpitation and shortness of breath on exertion. Pulse small, regular, fair tension (72).

Respiratory system.—Respirations 24; percussion and auscultatory signs normal.

Urinary system.—No pain or discomfort or undue frequency in micturition. Urine, 40 to 50 oz. daily, sp. gr. 1015, acid, no albumen, sugar, or bile.

Generative system.—Had not menstruated for twelve months.

Treatment.—Milk and lime water, one ounce every hour. The following mixture was ordered: one drachm of sulphate of magnesia, five grains of sulphate of iron, ten minims of dilute sulphuric acid, to one ounce of peppermint water; to be taken three times a day.

Progress of case.—She did not vomit after admission, and the only alteration in her treatment was to adjust the quantity of sulphate of magnesia to the requirements of her bowels. July 6th: She was allowed bread-and-milk.—8th: Two eggs were added.—11th: A light pudding was ordered.—14th: Milk, boiled chicken, light pudding.—17th: Mutton diet. The mixture at this time caused

¹ Delivered at the General Hospital, May 21st, 1890.² Reynolds' System of Medicine.

rather profuse diarrhoea, which continued after it was stopped, but rapidly subsided on a diet of milk and lime water and the use of the bismuth mixture. She was only on this treatment for one day.—23rd: Discharged cured.

This case, although it presents some unusual features, perhaps not attributable to the stomach lesion, is, on the whole, a good example of the disease. What the "tumour" was must remain doubtful, as no tumour was found in the abdomen, and it is possible that there never was one. It is certainly most likely that the hæmorrhage was from the ulcer, and had nothing to do with any tumour, although she supposed it had. The chief symptoms by which the presence of ulcer of the stomach may be recognised are (1) pain directly after food, (2) vomiting soon after taking food, and (3) hæmatemesis. Unless these are present the diagnosis is doubtful, and of these the most important is hæmatemesis, which was absent in only one of the cases I have included in my list. Nevertheless, ulcer of the stomach may be present in a latent state without giving rise to any of these symptoms, and perforation may occur without any history of previous gastric trouble. We will look into these three cardinal symptoms a little more closely. Pain was present in all my cases. It was usually described as "burning" in character, sometimes as "sharp and piercing," or "dull and gnawing," but I think "burning" is to be borne in mind as the typical form of the pain. The pain can be localised by the patient, who can point out the precise spot. It was usually referred to the epigastrium or lower end of the sternum, less often under the left breast, or even in the right hypochondrium. I saw a case in consultation recently, proved by post-mortem examination to be one of ulcer of the stomach, in which the pain was referred to the region of the gall-bladder and passed down to the right. The pain was always worse after food in all but one case, and in that it was so sometimes; but in the case just referred to the patient, a gentleman aged fifty-three, expressed himself as invariably in less pain after taking food. This is quite exceptional, and only illustrates the difficulty that may occasionally occur in diagnosis. Vomiting after food with relief to the pain is not a very constant symptom, and is much more characteristic of hysterical gastrodynia. It was absent in five out of these eleven cases, and is only stated in one case to be frequent. This is a point well worth bearing in mind. Hæmatemesis was present in all but one case, Emily W— (No. 7), and I attach so much importance to this symptom that I admit that the diagnosis of that case is doubtful. When the quantity is large the blood may be bright and unaltered, but when it is small in quantity and has remained some time in the stomach it becomes darkened in appearance, resembling coffee-grounds. Beef-tea, cocoa, and preparations of iron &c., may produce somewhat similar appearances. The distinction can only be made by the spectroscope or by testing for hæmin crystals. This is done by drying the material to be examined on a glass slide, powdering it, adding a crystal of common salt and a few drops of glacial acetic acid, and heating gently, when hæmin crystals will be discernible by the microscope if blood is present. It is, however, of the utmost importance that the actual fact of the blood coming from the stomach should be placed beyond doubt, for it is not uncommon to be told by hysterical patients or their friends that vomiting of blood has taken place, yet when carefully observed this resolves itself into blood-stained saliva caused by sucking the gums, from carious teeth, &c. It is a symptom of such importance that you should always see the vomited matter yourselves, and not trust to any report from attendants. If you are told that hæmatemesis has occurred recently, you should carefully examine the stools, because it is almost certain that some of the blood will have passed into the intestine, and will give rise to the characteristic tarry stools. Here, again, you must bear in mind that iron and bismuth blacken the stools, and if under treatment the patient may very likely have been taking one of these drugs; but the blackening from blood is far more intense than that produced by either of these metals, which are usually present in only small quantities. While in the absence of hæmatemesis the diagnosis of ulcer of the stomach is incomplete, it may also be said that where profuse hæmatemesis occurs ulcer of the stomach is almost certainly present. Such profuse hæmorrhage may, however, occur from (1) rupture of varicose œsophageal veins in cirrhosis of the liver, (2) rupture of an aneurysm into the œsophagus or stomach, and (3) cancerous ulceration of the stomach; but, as a rule, in cancer the hæmor-

rhage is not profuse, and gives rise to coffee grounds vomiting.

Those cases of cirrhosis of the liver in which profuse hæmatemesis occurs are not uncommonly just those which may have hitherto remained latent owing to the great development of the collateral venous circulation having prevented the occurrence of ascites. Under these circumstances the patient may appear in good health up to its occurrence, which may be at once fatal. The diagnosis must depend upon (1) the reduced size of the liver as made out by percussion, and (2) the absence of gastric pain, &c. The latter is of less value; for I remember a case in ward X of sudden fatal hæmorrhage from a gastric ulcer which had remained quite latent, the patient being under treatment for phthisis. There were tubercular ulcers in the intestine, and the stomach ulcer was probably tubercular in its origin, though it presented all the appearances of a simple ulcer. Assistance in diagnosis is also obtained from the sex and age and habits of the patient, though these are not entirely trustworthy. The rupture of an aneurysm is almost invariably immediately fatal; so that if it has not been diagnosed before, it will probably not be discovered, though it may be suspected where the hæmorrhage is very profuse. There is not a very uncommon position for an aneurysm behind the stomach arising from the abdominal aorta just as it emerges through the diaphragm, and such aneurysms are exceedingly difficult to recognise. A thoracic aneurysm rupturing into the œsophagus might be expected to have revealed itself beforehand by pressure and other signs; but it must be admitted that small aneurysms of the descending aorta may exist without giving rise to any symptoms by which they can be diagnosed; fortunately they are not very common.

Cancer of the stomach, if seated in the pylorus, causes a tumour which can be felt, while cancer of the cardiac end usually gives rise to symptoms of œsophageal obstruction, which, taken with the age of the patient, the cachexia, and the moderate nature of the hæmorrhage, will permit a correct diagnosis. Fortunately neither cirrhosis of the liver, aneurysm, nor cancer is liable to occur in young women; and it may comfort you to know that you may diagnose ulcer of the stomach in this class of patient from hæmorrhage alone, with little fear of making a mistake. But without hæmatemesis the difficulties are great, especially great in this very class, for it is among them that we meet with nervous vomiting and gastrodynia, symptoms which I am convinced are constantly incorrectly attributed to ulcer of the stomach. This is all the more unfortunate as these patients do not get well, but go from bad to worse, if starved and treated with bismuth and nitrate of silver. But I claim that my plan of treatment has the advantage in a doubtful case that it is applicable to either condition.

The following case is a good example of this affection:—

CASE 2. *Gastrodynia, pain, vomiting, anorexia; no hæmatemesis; history of hysterical fits; amenorrhœa.*—Edith M. J—, aged fifteen, admitted on Nov. 15th, 1889, complaining of pain in the stomach, sickness after everything she takes, even after water, for the last two years.

Family history.—Father, aged forty-seven, in good health; mother, aged forty-five, subject to "sick headaches"; one brother died in infancy; another brother and a sister living and healthy. Patient had a good home and plenty of food.

Previous history.—Had "low fever" when a child. Six years ago she broke her right humerus and dislocated the shoulder in a fall from a swing. A year later she dislocated her left elbow in a fall when walking; three years ago for six months she suffered from "struggling fits," without loss of consciousness, which occurred about every two weeks. In August, 1889, she was in Wolverhampton Infirmary with "inflammation of the right hip," but it got quite well six weeks after leaving that institution. She had been a total abstainer for six months.

Present illness.—Two years ago she began to suffer from vomiting and headache, without nausea or pain. There was never any blood. The vomiting generally occurred immediately after taking food. This lasted about a month, and three months later she had a second attack, followed by others at intervals up to the present time. This attack began two months before admission; but for the last three weeks she had suffered pain in the epigastrium, coming on directly she had taken food. There had also been some nausea. By lying down she had managed to control the vomiting to some extent.

Present condition.—A well-developed, well-nourished girl, looking more than her age. Temperature 98.3°.

Alimentary system.—Lips pale; teeth, some molars decayed; tongue pale and moist; disagreeable taste in mouth; no appetite; marked thirst; complained of pain after taking two ounces of milk and lime water; the pain was increased by pressure and lasted a quarter of an hour. The pain was localised to a spot the size of a crown-piece, and the tenderness was manifested on very slight pressure. Bowels confined. Liver dullness, three inches and a half.

Circulatory system.—Apex beat in fifth left interspace, sounds normal. Pulse regular, rather weak, compressible (78).

Respiratory system.—Respiration 16; percussion and auscultatory signs normal.

Urinary system.—Urine 1012, acid, no albumen, sugar, or bile.

Generative system.—Has never menstruated.

Treatment.—Two ounces of milk and lime water, reduced next day to half an ounce every hour; the following mixture was ordered, to be taken three times a day,—five grains of sulphate of iron, one drachm of sulphate of magnesia, ten minims of dilute sulphuric acid, one ounce of peppermint water.

Progress of case.—This treatment was continued except that the dose of sulphate of magnesia was increased or diminished as found necessary, according to the state of her bowels.—Nov. 21st: No vomiting after the half-ounce doses of milk and lime water were instituted, but she complained of pain. One ounce of bread-and-milk every hour.—24th: Sick this morning; still in pain. A piece of lint soaked in liquor epispasticus applied to epigastrium.—27th: No more sickness; pain better. Ordered house diet.—Dec. 7th: Discharged cured.

The points in this case worth noting are—1. The history of other nervous affections. 2. The age of the patient, which is less than that at which gastric ulcer usually occurs. 3. The persistence and frequency of the vomiting, which followed everything, even water. As already pointed out, vomiting in ulcer of the stomach rarely occurs after every meal, and it is very exceptional to find the stomach so irritable as to reject all food. So much has this impressed itself upon me that I would ask you to pay special attention to this point. 4. The localisation of the pain, which is usually given as a sign of some value in ulcer of the stomach, but which evidently must not be too strongly relied upon. 5. The absence of hæmatemesis. 6. The beneficial effect of a small blister, so often observed in nervous pain. 7. The very rapid recovery of the patient under appropriate treatment.

If you will bear in mind the teaching of this lecture I have no doubt you will recognise the majority of cases of gastric ulcer that come before you, while you will also avoid the mistake of treating stomach neuroses too seriously; but I should not be doing my duty if I did not warn you that ulcer of the stomach may occur under quite different circumstances from those which I have told you are typical. About this time last year I saw with Mr. Pearse of Brierley Hill a gentleman who complained of pain in the right hypochondrium relieved by food. He was about fifty-three years of age, very careful in his habits, but a great worker and sometimes irregular in taking food. The pain was described as burning and as radiating down towards the anterior superior spine of the ilium. Physical examination revealed nothing. The case was regarded as one of gastrodynia, the diagnosis being based on the relief to pain by taking food and the absence of other indications. He improved greatly on a mixture containing hydrochloric acid and strychnine. During the winter he got very constipated, his pain returned and increased. Mr. Pearse saw him, and with some difficulty removed a lot of scybalous fæces from his bowel, but the pain continued, and he was said to have passed a gall-stone and to have been slightly jaundiced. When I saw him I heard this history, but I heard too that he had on two occasions vomited some coffee-grounds matter. I confess that I did not attach proper importance to this symptom. Relying on the history, I agreed in the diagnosis of biliary colic, and was greatly astonished to hear next day that he had died in the night, evidently from internal hæmorrhage. So far was I from recognising the true nature of the case, that I then believed that death was due to the rupture of an aneurysm which had previously leaked into the stomach. Yet a post-mortem examination showed that the hæmorrhage

had come from a simple round ulcer on the posterior wall of the stomach, near the greater curvature and midway between the cardiac and pyloric openings. This case does not show the consultant in a very favourable light; but our failures are often the most instructive as well as the most impressive cases. The points of interest are: (1) the seat of the pain, which was not explained by the position of the ulcer; (2) the relief to the pain after taking food, so directly opposed to what we should expect from an ulcer, though I have already told you that we had the same statement in another case (No. 1 in list); and (3) the absence of hæmatemesis until within a few weeks of the termination of the case. I need hardly remark upon the difficulty created by the statement that there had been slight jaundice, followed by the finding of a gall-stone in the fæces. Altogether it was a very puzzling case, and I hope you may not have many such to deal with.

Finally, I must say a few words about treatment, though you have already heard the details in the accounts of the cases submitted to you. As a general rule, I order at first half an ounce of milk and lime water every hour as the only food, with the sulphate of iron and magnesia mixture in purgative doses three times a day. Ziemssen and Leube use sulphate of soda or Carlsbad salt in purgative doses, with the object of removing all remains of food from the stomach; but I use this mixture simply to remedy the anæmia and constipation so generally present. If hæmatemesis actually occurs, or the patient is admitted with a very recent history of it, I order ice to suck, and feed per rectum for a day or two, and then proceed as before. When, as usually is the case, vomiting and pain cease under this treatment I double the allowance of milk and lime water, then change the diet to soft bread-and-milk, getting on through pounded chicken and custard and eggs to ordinary diet as rapidly as possible. The good results are attested by the table. It may be objected that these cases are not cured, but that there is only a temporary remission of the symptoms. I do not think this is true, although one case did undoubtedly relapse three times, as all these patients were made out-patients under me, and attended for a longer or shorter time, continuing to take the medicine. Had they relapsed it is most probable they would have reapplied for admission to this hospital, where, according to the rules, they would have been placed under my care. It may be thought that there is danger by this plan of exciting hæmorrhage or causing perforation, but I think this fear is sufficiently answered by the record.

Lecture

ON

KOCH'S TREATMENT OF TUBERCULOSIS.¹

By THOS. WHITESIDE HIME, A.B., M.D., &c.

DR. HIME stated that he had felt great reluctance in accepting the complimentary invitation of the secretary to deliver an address to the Society on the above subject—first, because he hardly felt competent to deal with so important a matter in the brief time available; and secondly because, so far as he could ascertain, everyone he met seemed to have his mind definitely made up with regard to the whole question. He had heard many medical men in Berlin, who had been treating cases of tuberculosis by Koch's method ever since the liquid was in use, say that they must postpone giving a definite opinion as to its merits until sufficient time had elapsed to make it possible to speak with certainty. But he had met only very few persons who had never seen a case at all who had not made up their minds, and who were not generous in imparting their conclusions on the subject. Professor von Bergmann said in his last lecture at Berlin that it might be January, 1892, before he

¹ Delivered before the Bradford Medico-Chirurgical Society. The lecture was illustrated by photographs thrown on the screen by a magic lantern, showing patients at different stages of treatment; and two patients suffering from lupus were also shown, which were under treatment.