A CASE OF GASTRO-ENTEROSTOMY, COMBINED WITH GASTROSTOMY, FOR ULCERATION OF THE STOMACH,

CAUSED BY SWALLOWING HYDROCHLORIC ACID.

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LEEDS.

I HAVE recently had under my care a patient who, as the result of the accidental swallowing of a caustic fluid, suffered from extensive ulceration of the stomach, and consequent stenosis of the pylorus. The conditions disclosed by operation, and the success of the procedure adopted, make the case worthy of note.

History.

Mrs. B., aged 28, was sent to me by Dr. T. McC. Foley, of Scarborough. The history was that, seven weeks ago, she drank "a few mouthfuls" of "spirits of salts" (hydrochloric acid) from a bottle, by mistake. She quickly realized the mistake by reason of the onset of extremely severe pain in the mouth, throat, and stomach; she did not vomit then. Within the next few days, the lips, mouth, and throat became very sore, and the attempt to take any form of food was followed by severe pain and by vomiting. For the last three weeks she had been unable to take any food, either liquid or semi-solid, without great pain, and almost instant vomiting. She had lost over 2 st. in weight. On her admission to the hospital it was found that she could drink a couple of ounces of milk quite freely, but after a period of from three to seven minutes the milk was vomited. Apparently none of it was retained. A stomach tube passed 19 in. quite readily, so that it was clear there was no obstruction in the oesophagus.

Operation.

On September 15th, 1905, I operated, opening the abdomen to the left of the middle line. The stomach was found small and empty. The pyloric portion, with the pyloric antrum, was solid and hard, resembling a large rectal bougie. To this portion of the stomach there was apparently no cavity at all, and it seemed quite impossible that any fluid could find its way through so dense a tumour; the remainder of the stomach felt rather thicker than normal, and velvety.

A posterior gastro-enterostomy was performed in the usual manner. The appearance presented by the stomach mucosa was very remarkable. In colour it was of a deep plum; but the most striking feature was its tenuity. In place of the thick, rugose, mobile membrane, there was found a thin, friable coating of a membrane, which was intimately adherent to the parts beneath it. On incising the stomach its cavity was opened as soon as the muscular layer was cut, so that the excision of a part of the mucosa in the form of an ellipse was impossible. Here and there small patches of greenish—almost gangrenous—material were seen. The opening in the stomach for anastomosis with the jejunum was made nearer to the cardiac orifice than usual. The operation was completed in the ordinary manner.

When the stomach was replaced a portion of its anterior surface, midway between the curvatures, and well towards the cardiac end, was seized in a clip, and a small opening made into the cavity. Through this opening a piece of indiarubber drainage tube of about the size of a No. 14 (English) catheter was passed. With the fingers of the right hand placed below the stomach; this tube was guided through the gastro-enterostomy opening into the distal limb of the jejunum for about 5 in. This being done, the right hand was removed, and

the omentum replaced. At the point of entrance of the tube into the stomach on its anterior wall, a gastrostomy was now performed after "Senn's method." A single catgut stitch fixed the tube to the edge of the opening, and a series of circular purse-string sutures were applied round the tube in tiers, so that a cone of the stomach was infolded. A couple of sutures then fixed the anterior wall of the stomach to the parietal peritoneum of the abdominal wall, and the wound was closed.

After-History.

During the first two and a half weeks the patient was fed every four hours through the tube in the manner usual in cases of gastrostomy. The fluid, however, would not pass into the stomach, but through the stomach directly into the jejunum, into which it was delivered, about 5 in. below the gastro-enterostomy opening. The fluids administered were peptonized milk, beef-tea, with plasmon, and sanalogen and water. During the first three or four days, owing to a misunderstanding on the part of the resident officer in charge of the case, some fluid was given by the mouth, but after this time no drop of any fluid was given by the mouth for two weeks. The mouth was frequently rinsed and the teeth frequently brushed, so as to ensure that the mouth was kept both clean and moist. The amount of fluid given at each meal was gradually increased from 6 oz. to 15 oz., the patient throughout was perfectly content and placid, only occasionally giving

vent to a good-natured grumble that she was hungry. On the eighteenth day food was again given by the mouth; at first sips of water, then tea, milk puddings, and so on. The tube was removed in the fourth week, and the little wound left in the abdominal wall speedily granulated up; there was never any leakage from it.

In January, 1906, Dr. Foley wrote to say that the patient had made a perfect recovery, and was taking solid foods in ordinary quantities.

An examination of museum specimens and a search into the records show that in cases in which an intensely irritating fluid has been swallowed, accidentally or with suicidal intent, the parts most affected are lips and mouth, the pharynx, and the first inch or more of the oesophagus, the lower end of the oesophagus immediately above the

cardiac orifice, and the pylorus and pyloric antrum. The greater part of the oesophagus escapes serious damage, though patches of ulceration, or even gangrene, may be distributed throughout it. So far as the stomach is concerned, the worst injury is inflicted on the pylorus, but in severe cases the whole mucous membrane may be affected.

In several of the recorded cases appearances very closely similar to that which I have described were recognized. The contraction and consolidation of the pyloric portion of the stomach have been frequently observed. Mr. Keetley likens the appearance in one of his cases to "a small sausage"; of a second he says: "the pylorus was thickened and so contracted that it would only just admit the closed blades of a pair of polypus forceps"; and a third that there was "thickening and a very tight stricture of the pylorus."

The mucous membrane is at once deeply burned; in the stomach it assumes very rapidly a deep purple or almost black colour, and ulceration speedily follows. In many of the specimens when a recent examination is made, patches of gangrene, with adherent food particles, may be recognized. In addition to the cauterization due to the

Posterior gastro-enterostomy, combined with gastrostomy. The tube passes through the new opening into the distal portion of the jejunum.

irritating fluid, a septic element caused by the decomposition of adherent food particles is present.

The symptoms noticed at the first moments are an intense burning of the labial and buccal mucous membranes, a scalding sensation in the throat, and an intense burning in the epigastrium. In many cases, though not in the one now recorded, vomiting occurs. The agony at the first may be almost unendurable, and shock is profound.

In the larger number of cases there is soon a marked difficulty in swallowing; when a few drops only of fluid are swallowed the pain elicited may be excessive. Thirst is intolerable, the soreness of the lips and mouth when the sloughs begin to separate is terrible, and a raw bleeding surface may be left. Vomiting is an early and a constant symptom; even when a very small quantity of fluid is taken it may be ejected at once or in a few minutes.

The character of the symptoms changes after a time, according as obstruction, due to cicatricial contraction in healing, is caused in the oesophagus or in the stomach. When a stricture forms in the gullet, it is almost always at the upper end; when in the stomach, it is at the pylorus and in the pyloric antrum. In an apparently favourable case the local conditions quickly clear up, and fluid food may be taken in fair quantity and retained; but, after the lapse of three or four weeks or more, vomiting, which has been absent or in abeyance, returns more seriously than before. The stomach dilates, and its muscular walls hypertrophy until the usual clinical picture of pyloric stenosis is produced in its most exemplary form.

In other cases the characteristic signs of obstruction in the oesophagus are produced, and in still others there may be obstruction both in the oesophagus, at the upper or lower end, and at the pylorus.

TREATMENT.

In all cases it is of the first importance to see that there is complete abstinence from food of any kind. By giving food the process of ulceration is quickened, the ulceration spreads, gangrene in more or less extensive patches occurs, and a virulent septic process is set going. The chief attempt should be directed to keeping the scalded surfaces sweet and clean. Mouth washes, sprays, gargles, frequent mopping of the ulcers with gauze swabs, all are useful in helping to ensure cleanliness. The administration of saline enemata by the rectum will help to relieve thirst to some extent.

It is probable that in all cases the safest course will be to have an early resort to surgery. By means of some operative procedure the feeding of the patient can be ensured for such a time as will allow healing to take place in the ulcerated patches.

The two operations—one of which will usually be needed—are gastrostomy, when the oesophagus alone is affected, and gastro-jejunostomy combined with gastrostomy, when the pyloric portion of the stomach is most injured. Duodenostomy, as practised by Hartmann, or jejunostomy alone, suffices merely to feed the patient for a time. They do nothing towards securing him against the almost certain troubles which will result from the mechanical obstruction at the pylorus due to the healing of the deeply ulcerated mucosa.

The operation practised in this case effects two purposes: it enables the patient to be fed while healing of the ulcerated surfaces is in progress, and by means of the gastro-enterostomy it establishes an alternative route from the stomach when the pylorus is closed by the contraction of the cicatricial tissue deposited in the ulcers.

UNDER the will of the late Mr. Joseph Fox of Lindley, Huddersfield, who died on January 12th, the Huddersfield and Agbrigg Infirmary receives a sum of £500.

STRASSBURG DOCTORS AND FEES.—The doctors of Strassburg have decided to follow the example of those of Berlin and some other large cities of Germany by raising their scale of fees. They have, however, bettered the instruction of their colleagues. Thus it has been agreed that visits at their own houses are to be paid for at the time. Visits to patients' houses, unless arranged for before 9 in the morning, are to be charged for at double the usual rate. For night visits, between 8 p.m. and 8 a.m., and for visits made on Sunday afternoons the fee is to be trebled. Consultations by telephone are to be charged for at the same rate as ordinary consultations. Accounts are to be sent in at least every six months.

The Lumslean Lectures

ON

INSANITY, ITS CAUSES AND INCREASE.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS, OF LONDON.

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LECTURE II.

THE CAUSES OF INSANITY.

IN this lecture I purpose considering some of the chief causes of insanity, and giving my opinion as to the part played by them in any increase which is evident among the insane. I shall in order take heredity and its influence, alcoholic excess, and lastly, influenza and its special effect on the increase of neuroses generally.

Much has been written on heredity of late, and still we are not in possession of a clue to what is and what is not transmissible. I accept it as a fact that no mutilation of, or late acquisition by, a parent will be passed on to children, but I must insist upon it that there is a very potent passing on of some tendency to neurosis. There is a common idea that all insanity is inherited, and also that all forms of insanity may be inherited.

The solution of the question whether this is true has far-ranging influence—first, medically and educationally, next socially, as to the right of those belonging to highly-neurotic or insane families marrying and having children. Of course, when there is the tendency in two persons, marriage by them should be stopped if possible.

There is, however, a strong tendency to breed out of neurosis if one of the mates is strong, healthy, and not related to the other. Consanguineous marriages are not dangerous from mere nearness of kin, and the old idea that the deaf and dumb and feeble-minded owed their weakness to such cousinly marriages has not been confirmed. It has been suggested that some of the increase is due to children being begotten by parents only partially recovered, and who have been discharged during their convalescence from asylums. By careful examination from reports of superintendents of asylums this has not been confirmed. Such cases have occurred in my own experience, but they have been very rare.

Neurotic heredity may be compared to the mycelium of a fungus which, unseen, spreads far and wide, and only sends up the fungus as evidence of its existence when conditions suitable to its growth are present.

I have to allow that there is such a thing as a pretty definite neurotic stock or type, but insanity as such is not transmitted, though with the insane there is a strong tendency to produce offspring who are unduly unstable. Insanity, like all highly-specialized mental capacities, genius, etc., tends to extinction or to nervous instability in the following generations.

The children of lunatics may be only neurotic, and never become insane, but the children of the lunatic whose insanity depends on marked brain decay, such as general paralysis, alcoholic insanity, and senile mental disorders, are likely to be mentally weak or morally insane. I have found that any great special power, whether mental or even muscular, is associated with danger. I have had a patient tell me that my safety depended on a dead level of respectability, while his instability depended on family genius.

It is interesting to note that tricks or habits may reappear in children, just as slight bodily peculiarities like the extra finger or toe. If we follow Darwin we should expect only very slight variations to occur and to recur. This is seen in the handwriting, which frequently is very similar in parents and children.

From these general remarks I now pass to concrete evidence. I have known a woman who was already insane, and incurably insane, have children who have, at least for years, remained free from insanity, though some have been unstable in other ways. On the other hand, I have known children of mothers who appeared to be sane during pregnancy yet became insane after delivery, develop insanity early in life or even to be feeble-minded from the first.