

## AN ADDRESS ON DILATATION OF THE STOMACH.

*Delivered before the Harveian Society of London.*

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(Continued from page 1195.)

### TREATMENT: DIETETIC.

IN treatment of dilatation of the stomach induced by a single excessive and indigestible meal or by a comparatively short course of overfeeding, or by an alcoholic debauch, it may be sufficient to fast absolutely for twenty-four or forty-eight hours to effect a cure, and in all cases in which the cause has been overfeeding or improper food, or food taken at a wrong time, an extremely strict and meagre diet for a few days will be the best starting point for treatment. No advantage would, however, result from fasting or low diet in cases of neurotic origin. Patients of this class will, it is true, often experience extraordinary relief for a time when first released from the obligation of taking food, but the effects are disastrous later. The inadequate supply of food leads to weakness, and with weakness comes impairment of the digestion and aggravation of the nervous susceptibility and irritability. A return of pain after meals is attributed to some article of diet, which is thereupon expunged from the list of permissible foods, and the patient enters upon a downward course of starvation, weakness, emaciation, indigestion, and pain, which often ends in an acute illness of some kind.

Having said so much with regard to the dieting of patients whose dyspepsia and gastric dilatation are primarily neurotic, the subject may be continued. The object we set before ourselves must be, as I have said elsewhere, not to level down the diet to the digestive capabilities of the stomach but to level up the digestion till it can deal efficiently with the amount of food required for the due support of the nervous system. No hard and fast rule can be laid down. A careful study of the patient's idiosyncrasies will be required, and the diet must be adjusted to these. Speaking generally, such a patient will digest better food which he relishes, even if it have the reputation of being indigestible, than the most digestible and scientifically prepared food which he eats by order and dislikes. A very common experience is that he is tempted by a good dinner, eats largely and indiscriminately, and then, instead of a bad night and great discomfort which he thinks he has deserved, he sleeps well and feels all the better for his indiscretion. A very important point will be to disabuse the patient's mind of the idea that pain after meals necessarily indicates that the food has been unsuitable; this will be more difficult to effect with women than with men. One day and under one set of circumstances anything will agree, on another day and under different circumstances nothing is digested. The general directions to be given will be to restrict the amount of fluid taken at meals, to eat starchy food in very moderate quantity as it is bulky and lends itself readily to fermentation, to take only one vegetable at a meal, not to eat when exhausted or especially when excited or anxious, or to eat very sparingly and simply at such times, not to jump up from meals and rush off to work of any kind. Subject to some such limitations as the above the food should be varied so as to tempt the appetite, and the resources of good cooking may be freely employed for the same purpose.

With regard to stimulants, a small amount as part of the two principal meals is usually helpful to the digestion, by giving a filip to the stomach, which may or may not increase the secretion of gastric juice, but more certainly augments the energy of the churning movements of the stomach. Experience is the best, and, indeed, the only sure guide in the choice of a stimulant. Good spirit, well diluted, is simpler than wine or beer, and can neither start fermentation nor supply fermentable material. For myself, I have never been able to recognise the superiority of whisky over brandy; and I am disposed to think that the reason why the former has

been so largely ordered by medical men is that it is nastier, and perhaps, therefore, less likely to be taken in excess. Good whisky is, no doubt, better than bad brandy, and *vice versa*. When any good, sound, genuine wine agrees with the patient, it may be taken in preference to spirit.

When the dilatation of the stomach has been primarily due to what may be called gastric causes, excessive and improper food and the like, the rules with regard to diet must be applied more strictly, and, as already stated, temporary starvation and a very limited amount of food for some time may be most useful. The rules will be: regularity in the hours of meals, and strict avoidance of intermediate food; little fluid with meals, and very little starchy matter, the object being, of course, to avoid distension of the stomach, whether by the bulk of food and drink introduced, or by the generation of gases. A familiar out-patient formula is "no beer, tea, or potatoes." On'y one vegetable should be taken at a time. The application of rules may usually be left to the common sense of the patient, but when this mental quality is entirely lacking it may be necessary to write down the dietary. Stimulants are less necessary than in the case of neurotic patients, and may often be forbidden altogether with great advantage.

An expedient often of great service in relieving some of the effects of dilatation of the stomach, and sometimes contributing to a cure, which may perhaps best be mentioned in connection with diet, is drinking hot water. This has become a common practice, and hot water is taken with meals or after or before or between meals for the relief of indigestion, the reduction of obesity, and various other purposes. The special object for which I have employed hot water has been the prevention of sleeplessness and nocturnal asthma. As already explained, flatulent distension is a frequent cause of inability to sleep on lying down, and especially of waking up at a given hour. In the latter case, remains of the last meal not carried on into the duodenum ferment and evolve gases. A large tumbler of very hot water sipped at bedtime stimulates the stomach to contract; almost always a certain amount of gas is expelled at once, and frequently sufficient to allow of sleep in cases where flatulence has prevented it. The contraction has the further effect of carrying any contents of the stomach forward into the small intestine, so that the copious draught of hot water washes out the stomach and prevents the lingering behind of contents which would undergo fermentation. Sometimes the addition of carbonate of soda, with perhaps  $\text{sulpho-carbolate}$  of soda, will add to the efficacy of the hot water, or a draught containing these salts with ammonia, compound tincture of chloroform, and other carminatives may be given half an hour before the hot water. Numerous cases of habitual and aggravated sleeplessness, and several of nocturnal asthma, have been effectually and permanently relieved by simple measures of this kind. Sometimes, however, the stomach is incapable of responding to the stimulus of hot water, even when aided by carminatives, and then the discomfort and distress are aggravated.

While speaking of the employment of hot water, it may be remarked that taken on an empty stomach in the morning the effect is entirely different; it is rapidly absorbed, and, passing through the tissues, acts as an eliminant. For stout and overfed people this is often very beneficial, but weak, thin, neurotic subjects are weakened and ultimately depressed by it.

Several objects have to be held in view in the treatment by drugs of dilatation of the stomach. The two principal are to rectify the chemical processes taking place in the stomach, so as to promote digestion and substitute peptonisation, which is not attended with evolution of gases, for fermentation, which gives rise to the formation of acids of various kinds and the setting free of gases, and to promote the contractile energy of the muscular walls, so that not only may the churning movements be efficiently be performed, but the contents completely expelled at the end of digestion, and passive distension be resisted.

When there is pain after food it may be necessary to give bismuth and magnesia or soda, with perhaps a small dose of opium before meals, and when there is heartburn to give carbonate of soda or other alkalies; when, again, there is flatulent distension, carminatives may be required. But it should be recognised that measures of this kind are only palliative, and that in employing them we are not treating the disease,

but only some of its consequences. It is, of course, useful, and indeed necessary, to procure the eructation of gases which are distending the organ, but, if no other result is sought, the benefit is fugitive, and the remedies in time lose their efficacy. So, again, with alkalis: unless the acid fermentation is stopped they are required in increasing quantity, and the amount taken may come to be enormous—if I rightly understood a professional friend the other day he was taking 6 drachms of bicarbonate of potash per diem. A good method for the administration of antacids is in the form of lozenges, which are to be slowly sucked, so that alkaline saliva is carried down in quantity as well as the drug, as was pointed out by Sir William Roberts.

Pepsine, again, and especially peptonised foods, which often find a useful place, are also to be looked upon as chiefly palliative.

The two main objects in the treatment of dilatation of the stomach, the prevention of gaseous distension and improvement of the contractile energy of the muscular coats, are attained more or less perfectly by many familiar mixtures and pills, and different members of the Harveian Society will have been led to place confidence in one or other combination of antiseptics and tonics. I will simply indicate some which have appeared to me to be of service.

When there is eructation of gas having the odour of sulphuretted hydrogen the best remedy is, according to my experience, sulphite of soda. The sulphurous acid disengaged probably combines with the sulphuretted hydrogen, and also kills the particular microphytes which disengage this gas. At any rate the foul smelling eructations have always promptly ceased. The sodium sulphite may be given in doses of 5 to 10 grains, with carbonate of soda and nuxvomica between meals.

Another combination which I have frequently employed with conspicuous benefit has been sulpho-carbolate of soda in doses of 5 to 10 grains with carbonate of soda, spirit of ammonia, and gentian. It may be given in the early stages of a case when there is distension and discomfort at a certain interval after meals with eructations. Ginger, chloroform, or peppermint may be added to the mixture to promote the expulsion of gases. If there is gastric or intestinal catarrh, or when the evacuations are pale, phosphate of soda in half-drachm or drachm doses is a useful addition; or 1 or 2 drachms of phosphate of soda may be given early in the morning in hot water with taraxacum.

Other useful remedies are creasote and carbohc acid, which are best given in pill form with strychnine. Advantage may also be taken of the bactericidal powers of mercury to arrest fermentation and the formation of ptomaines. A very useful combination is gr.  $\frac{1}{4}$  each of hydrarg. perchloride, or binioidid., and strychnine with  $\frac{1}{2}$  or  $\frac{1}{4}$  of creasote or carbohc acid in a pill which may be given before or between or after meals. When arsenic is indicated as a tonic by the condition of the nervous system gr.  $\frac{1}{4}$  to gr.  $\frac{1}{8}$  of arsenious acid may be included.

In a large proportion of patients, careful diet on the lines indicated and persevering treatment will bring about improvement of the digestion and removal of the dilatation of the stomach; but relapses are frequent and difficult to prevent, and cases are met with in which, from mechanical causes or from entire loss of tone and contractility in the muscular walls, no impression is made on the condition. Fortunately a resource still remains open to us in the stomach tube.

#### WASHING OUT THE STOMACH.

The process of washing out the stomach is a very simple one. The fluid usually employed is a weak solution of bicarbonate of soda, about a drachm to the pint of lukewarm water; 10 to 20 grains of sulphocarbolate of soda may be added when the contents are offensive in character. The introduction of the tube is at first disagreeable, and provokes retching and perhaps vomiting, but the patient very soon learns to pass it for himself. He should sit bolt upright in a chair, bending the head slightly forwards, and the tube should be carried boldly to the lower end of the pharynx, the patient being told to make swallowing movements, and in the intervals to breathe deeply. When the extremity has reached the stomach, sufficient liquid should be poured into the funnel to fill the tube, without which it will not act as a

siphon. The tube is then pinched, and the funnel end is lowered so as to be well below the level of the stomach, when the water introduced and the contents of the viscus will flow out. The liquid should now be poured in till a sense of discomfort and fulness is produced (the amount required being noted), upon which it is made to return by again lowering the extremity of the tube. When the patient has become accustomed to the proceeding, the flushing may be repeated once or twice till the gastric contents have been completely cleared out, and any mucus clinging to the walls has been washed away.

Care should be taken that the whole of the fluid introduced is withdrawn, or discomfort and sharp purging may follow. The capacity of the stomach may thus be definitely ascertained, and the amount of liquid it will hold should be carefully noted. It will usually be found to diminish, at first rapidly, later more gradually.

The relief afforded by washing out the stomach is usually very striking. When irregular and intermittent action of the heart has been one of the most troublesome symptoms, this is at once suspended, so that for a time the pulse becomes quite regular, for how long I have had no opportunity of noting, probably till after the next meal, and the heart's action becomes steadier and stronger from day to day, and the patient can take exercise with greater comfort.

Sleeplessness is usually much relieved. I have not yet found it necessary to order the washing out at bedtime, but it would probably be still more efficacious in preventing disturbance of sleep if done then.

Vomiting is of course put an end to; there is no further occasion for it. Flatulent distension also is usually got rid of more easily by eructation. But more important than the removal of these symptoms is the return of appetite and the disappearance of the loathing of food which is so common.

By way of conclusion, two or three cases may be related in outline.

CASE I.—A lady, aged about 45, whom I saw in consultation with Mr. J. T. Mould. The special feature in her case was vomiting. This usually occurred in the evening or during the night, sometimes more frequently, and was very copious. She had reached an extreme degree of emaciation and weakness; her skin hung in folds and wrinkles, and her complexion had a deep yellowish brown tint. She might have sat for a picture of cancerous cachexia. She was very energetic, and insisted on going out, but could only crawl for a few hundred yards. The abdomen was deeply excavated, and the enormously dilated stomach could be seen in its upper segment. The lower border descended from the left hypochondrium to near the umbilicus, where the pyloric third bent suddenly upwards towards the liver. On handling, the muscular walls contracted and the stomach defined itself through the thin abdominal wall, while a peristaltic movement travelled slowly from the cardiac to the pyloric end. On succussion a heavy fluid wave could be felt to impinge on the hand or stethoscope when the stomach was full; when it contained only a small amount of fluid a loud splash was heard. The suspicion of cancer of the pylorus was heightened by the presence of a small firm tumour just where this end of the stomach dipped under the liver. It appeared, however, to be too mobile and to move independently of the pylorus, and it was not always to be felt. On careful examination it was concluded that it was probably the gall bladder containing a calculus or calculi. Mr. Thomas Smith saw the patient two or three times, and the question of operation was carefully discussed. Some relief, however, had been afforded by washing out the stomach, and it was decided to give this treatment a thorough trial. It was undertaken by Dr. Callender, who had done the preliminary washing out. The patient very soon learnt to pass the tube for herself, and the result was a complete recovery. The last I heard of her was that she mingled with the crowd at the Royal wedding.

CASE II.—In June I was asked to meet Mr. Bryant, the President of the Royal College of Surgeons, Dr. Crisp, and Mr. Lyster at the Bolingbroke Pay Hospital to discuss the question of operation upon a young man, aged 27, who had been suffering for two years from vomiting. He was much reduced in flesh, weighing only seven stone (his height being 5 feet 8 inches). There was tenderness on pressure in the epigastrium, and in this region was a firm, solid mass, not moving freely in respiration, and not very well defined as to its lower border. An important consideration was whether or not this was a malignant growth. At the age of the patient, however, cancer in this situation would not have taken two years to bring about a fatal termination, and it was thought to be more probably a mass of inflammatory exudation consequent upon a gastric ulcer which had nearly perforated. Adhesions and exudation round the pylorus would obstruct peristalsis, and prevent the stomach from emptying itself, and retention of the gastric contents would interfere with the healing of an ulcer. It was decided, therefore, to wash out the stomach, which was carried out by Mr. Lyster. The vomiting ceased, and the patient left the hospital a stone heavier, and has since been able to return to partial work in the city.

In dilatation of the stomach of neurotic origin, or in which the principal symptoms are cardiac, while the results of washing out the organ are not so palpable, they are often very striking.

In one case a gentleman, aged about 60, had apparently nearly lost his

life from embarrassment of the heart, brought on by hurrying to catch a train after a hasty meal: he had been brought home pulseless, cold, and cyanosed. For some time afterwards he was liable to attacks of faintness and breathlessness in the night or after food, and the action of the heart faltered after the least exertion. Great dilatation of the stomach was found to exist, with considerable upward displacement of the heart. This had, no doubt, been kept up by incessant feeding, which an anxious wife had insisted upon against the advice of the medical man, but when the diet was properly ordered the dilatation persisted sufficiently to give rise to serious discomfort from heart symptoms. Here a few washings out by Dr. Callender were followed by remarkable relief, although the gastric contents were on the first occasion which I witnessed only a few shreds of undigested food and a small quantity of mucus.

The moral of this communication is the desirability and usefulness of a careful physical examination even in an affection which is so generally regarded as a purely functional derangement as is dyspepsia.

## MEMORANDA:

### MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

#### POISONING BY ESSENCE OF PENNYROYAL.

I was called to Mrs. S., a small, delicate woman, at 10 P.M., October 29th. An hour previously she had taken three-pennyworth (3ij) of essence of pennyroyal, with the object of procuring abortion. She was two months pregnant. She was in a very excited and frightened state. Both pupils were dilated to the size of a sixpence. The pulse at the wrist was very feeble on my arrival, and in a few minutes after not perceptible at the wrist. I gave a stimulating emetic immediately, followed by two quarts of tepid water. This acted well, and she rapidly recovered. Next day she was nearly quite well, but kept her bed.

I find pennyroyal described in Taylor's *Medical Jurisprudence* as having no therapeutic action, and being quite harmless. The patient assures me she took nothing else, and when I arrived the room smelt strongly of the peculiar pungent odour of essence of pennyroyal; and the bottle, an 8-ounce one, which contained it, was handed to me, and I searched the room, and could find nothing else. It is quite possible she may have taken more than she says. I saw the chemist where she obtained it, and he says the quantity he sold was 3ij.

Clapham Common, S.W. E. F. FLYNN, L.R.C.S., L.R.C.P.

#### COW-POX AND SMALL-POX.

I HAVE read Dr. Edwin Rickards's presidential address, reported in the *BRITISH MEDICAL JOURNAL* of October 4th, from which it appears that Dr. Rickards holds the opinion *inter alia* that "cow-pox in the cow is inoculated small-pox."

The following circumstance, which came under my observation when acting as dispensary medical officer in an adjoining district would hardly bear out that view:

In the summer of 1887 some patients appeared at the dispensary suffering from a rash over their hands and arms, which so closely resembled small-pox that they would seem to have been inoculated a few days previously. On inquiry I found they had all been engaged occasionally in milking, and noticed a somewhat similar rash on the teats and udders of the cows, and believed that they had contracted it from them. Soon after I examined some of the cows; they seemed to be suffering from typical cow-pox, the rash, which was almost exclusively confined to the teats and udder, being in some cases pustular, in others vesicular, according to the stage of development. There seemed little constitutional disturbance, but the animals failed greatly in their milk. About the fourteenth or fifteenth day the rash began to disappear. Almost all the cows within an area of 3 and 4 miles were affected. No death occurred. The outbreak lasted over one month. I was informed that a similar outbreak occurred in the district about ten years previously. With regard to the patients affected: (1) None but milkers were affected; (2) the rash ran a typical inoculated small-pox course; (3) one patient was inoculated on the left arm from lymph taken from a vesicle on the right, which "took" splendidly; (4) there had not been small-pox or scarlatina in the district, nor any adjoining district, for at least three years previously;

(5) no one seemed to be in any way affected by using the milk.

I much regretted that I was unable to procure a supply of the lymph, either from the patients affected or from the cows, the idea having become in some way prevalent that it would be against their interests. In what manner the disease originated it is impossible to say, but I was unable, after a good deal of inquiry, to trace any source or cause. It seemed to occur spontaneously, and to spread from one animal to another in the same building and in the immediate neighbourhood. There was one farm, about three miles from the village, on which the animals were affected, but I had not been able to trace any connection with the others, the nearest cattle being over half a mile.

From the above it will, I think, be admitted that it is a little premature to put forward the view "that cow-pox in the cow is inoculated small-pox," and "that the rarity of cow-pox at the present time is due to fewer persons following their occupations while suffering from small-pox."

Bundoran, co. Donegal.

J. D. McFEELY, L.R.C.S.I., etc.

#### CONCEALED ACCIDENTAL HÆMORRHAGE.

IN October, 1892, I was called to see Mrs. A. I found her in a collapsed condition, markedly anæmic, face bathed with a profuse perspiration, cold extremities, sighing respiration, and pulse imperceptible at the wrist. The abdomen was much distended, the right side being more prominent than the left. I could distinctly make out the outline of the uterus with its contents. On firm pressure on the right side and posteriorly, it felt unusually soft and boggy, and feeble uterine contractions could be detected on firmly grasping that organ, but the patient was apparently insensible to them. No foetal heart sounds were audible. There was no external show; the os was high up, soft, and dilated to admit two fingers, the head presenting.

Her previous confinements were normal. She was over eight months pregnant, and had only arrived in the village the previous day. She stated that when leaving home in the morning she felt perfectly well, but on the way she was sitting behind a van, and accidentally slipped off, coming heavily to the ground. She got up and proceeded on her journey, feeling no great inconvenience from the fall. This occurred in the evening. When she arrived at her destination she partook of a hearty supper, went to bed, and slept soundly till the morning, when she awoke with cramp-like pains in the stomach. On attempting to get out of bed she fainted.

I diagnosed concealed accidental hæmorrhage. I lowered her head, elevated the limbs, applied heat to the body, gave her a full dose of ergotin and sal volatile hypodermically, and put on a firm binder. I also ordered her brandy and milk in small quantities frequently by the mouth. I then introduced my hand and ruptured the membranes. What little liquor amnii came away was almost clear. Having no uterine dilators with me, I proceeded to dilate with my fingers. Fortunately the os was in a pliable condition, and after some little time I got it sufficiently dilated to enable me to apply the forceps and deliver.

The child was born in an asphyxiated state, and possibly might have survived had I been able to pay it sufficient attention; but the mother's condition was so alarming that it occupied all my time, as she fainted with the birth of the child. I gave a hypodermic injection of ether, and an enema of hot water and salt, removed the binder and got firm hold of the uterus, and succeeded in expelling the placenta and a basinful of clots. I still kept firm hold of the uterus to prevent any relaxation. She rallied after some little time, and the uterus contracted firmly without any further loss of blood. Recovery was uninterrupted though slow.

My reasons for publishing the case are as follow: First, the time that elapsed between the accident and the appearance of the symptoms—about seventeen hours—for I have no doubt that the fall the previous evening was the cause. Secondly, the fact that the child, in spite of the imperfect blood supply, was born alive; the placenta, in my opinion, was centrally detached, and only adherent to the uterine wall by its margins. Thirdly, the lateral bulging of the wall of the uterus causing a prominence of the abdomen.

Harlington.

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