process continues and ends in cicatrisation, so long as no inflammation reappears to interfere with its progress.

When a granulating wound becomes the seat of inflammation, the reparative process at once ceases, and what had been a granulating, soon becomes an ulcerating, surface. With these clinical facts before us, which are familiar enough to practical surgeons, there should be no difficulty in demonstrating that repair and inflammation are not only not identical, but that, whilst the one is wholly formative, the other is mostly, if not always, destructive; the one is physiological, the other pathological. Is it not, therefore, absolutely necessary that the teachers of students should have clear views upon these points, and not by such terms as "the formative termination of the inflammatory process," and other allied mixed expressions, put into students' minds a cloud of words to cover their own uncertain views? Is it not incumbent upon all teachers to enunciate that repair and inflammation are not only not identical, but that they are incompatible; that repair only begins in a tissue that has been inflamed when the process called inflammation has left it; and continues to complete its work as long as the inflammatory action is kept away; that when inflammation attacks a wound in which repair is progressing the process is at once arrested; and that what was repair then becomes disrepair, if not ulceration.

Allow me for a few minutes to call your attention to some practical points which require looking into; since it seems that, in our general advance in medicine and surgery, we sometimes in special subjects recede to the practice of our ancestors. This may be said to be true in the application of ligatures to arteries in their continuity; for some of our surgical brethren now prefer to tie in two places, and divide between the ligatures, an artery that has to be occluded for any cause, thus following the practice of last century rather than that of more recent times. It is not my intention here to criticise this practice, which I look upon with favour; but it would be interesting if we could obtain during the present session full particulars of the results of this revived method, and thus be able to estimate, from a practical point of view, the relative advantages of the different methods employed.

Again, may I ask, is there any truth in the accusation, which in recent times has been raised against surgeons, that the great successes which they have all round achieved in surgical operations have to a degree encouraged them not only to do, and to do rightly, what they would never have thought of doing a few years ago, but also to undertake operative measures which may with some justice be looked upon as speculative, if not rash? Have our successes engendered an over-estimation of our own powers, and led us to attempt and perform operations which past experience has not supported, and which seem to be less founded on scientific probabilities of success than on the sanguine hopes of their performers? Are operations upon the pylorus, or stomach, for cancer to be placed in this last category? Are there other operations which should be so classed? I have no wish to answer definitely these questions; but I do feel that it is very necessary that the principles which have hitherto regulated operative surgery, and which have tended to suppress all experimental work, unless based on a scientific probability of success, should be carefully observed, and that we should avoid even the semblance of an experimental operation.

And here let me express for surgeons generally the satisfaction with which, in our best new surgical work, we greet the kind aid we are receiving from physicians. We are now working, more than we have ever before worked, hand in hand with them to make the diagnosis of disease of the brain, kidney, bladder, and abdomen more certain; and we are thus, with a clearer diagnosis, mutually helping to bring within the domain of scientific surgery large classes of disease which have hitherto been deemed to lie outside its pale, and have consequently been either allowed to drift, or to pass into the surgeon's hands only when the time for effective action has passed or almost passed, and when operative measures can at the best be carried out for purposes of relief, but not of cure.

May I now ask for even more help in this direction, and urge our medical friends to seek surgical conference early, at least in all abdominal cases in which symptoms of intestinal strangulation exist, as well as in all cases in which intestinal obstruction is present, in order that operative interference, in both classes of cases, may not be delayed longer than the scientific diagnosis of the case requires; and that the subjects of these troubles may have a chance of relief from operative measures whilst there is still a reasonable hope of obtaining it. Let us remember that exploratory operations undertaken for diagnostic purposes, but which may be used for curative ends, when the exploratory proceeding shall have cleared up or established a diagnosis (which could not have been made by other means), are as scientific as any other operations, and often more satisfactory.

Let us, therefore, encourage our medical brethren to consider closely

with us surgical problems, in order that we may have their efficient help in diagnostic questions as well as their valuable support when action, by way of operation, is called for; and let us employ the opportunity to convince them of the expediency of expediting action as soon as the necessity for action has arrived, and at the same time to demonstrate the evil effects of postponing operative interference when such is demanded for either diagnostic or curative ends. In surgery, as in so many conditions of life, action, to be effective, must be decisive and not dilatory; it should ever follow closely upon decision.

These remarks which I have thus brought before you, I have been tempted to make under an impression that they will be generously received, and under the conviction that they have reference to subjects of grave clinical importance. Some of the subjects to which I have alluded are important in themselves; others are important on account of the principles embodied in them.

Should my observations appear to some too critical, let me say that they have not been made in any captious spirit, but with the feeling that it is always better for us to criticise our own work than to leave such criticism to others; that, as your president, it is as much my duty to point out what I believe to be defects in our work or in our mode of work, as it is to indicate the direction in which we should travel, and in the hope that, by so doing, I am likely to receive the full support of the members of this Society in what I believe to be the best for the "cultivation and promotion of practical medicine and surgery," objects for which this Society was formed, and which we all have so much at heart.

ON OPERATIVE DILATATION OF THE ORIFICES OF THE STOMACH:

BEING A SUMMARY OF TWO PAPERS ON THIS SUBJECT, BY
PROFESSOR LORETA, OF BOLOGNA.

By T. HOLMES, M.A., F.R.C.S.,
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SIGNOR LORETA, Professor of Surgery in the University of Bologna, has lately published (in the *Memorie dell' Accademia delle Scienze dell' Istituto di Bologna*, Ser. iv, vols. 4 and 5) two extremely interesting tracts: the first on Digital Dilatation of the Pylorus, and the second on Instrumental Dilatation of the Œsophagus; each of them giving the history of two cases, in which the proposed operation had been carried out with perfect success. In the former case, the operation is intended as a substitute for the resection of the pylorus; and, in the second, for gastrostomy. Each of them is intended only for cases of a chronic and non-malignant character—simple or fibrous stricture; and, in the case of the Œsophagus, also cicatricial contraction after injury.

As I find that the subject is almost unknown to my surgical colleagues, and as the notices which have hitherto appeared of Signor Loreta's operations in our medical journals have been very imperfect, I propose to give a summary of his pamphlets. The author's courtesy has also put me in possession of the subsequent most satisfactory experience of these operations, in the practice of other surgeons in Italy, as well as his own; and a sufficient length of time has elapsed to enable him to affirm the permanence of the cure so obtained.

1. *Dilatation of the Pylorus*.—The operation on the pylorus is best illustrated by the history of the first patient operated on, which is thus abbreviated from the original. He was a man, aged 47, named Ceconi, who had suffered from dyspeptic symptoms for twenty years, and had been treated in the hospital at Bologna, four or five years before the date of operation, for an ulcer of the stomach, near the pylorus (as then diagnosed). The symptoms were relieved, and for a time he returned to work, but soon relapsed; and, when admitted in August, 1882, was in the last stage of emaciation and exhaustion. The only food he could take was milk, in small quantity; every other species of food was at once rejected. Whenever he took any food, he could feel its passage towards the right hypochondrium, whence it returned at once towards the left, causing eructations, and frequently vomiting. The man was as lean as possible, pallid, and with a rough skin entirely devoid of any panniculus adiposus. The outline of the distended stomach could be seen through the abdominal walls, and it felt tense and elastic; the resonance extended from the fifth rib to the umbilicus. The contents of the stomach, drawn off by the pump, were yellow, containing a few coagula

¹ This operation would perhaps be more exactly described as "Dilatation of the Cardia and Œsophagus."

of milk, and decidedly acid. When left at rest, they separated into three strata: the upper one mucous, and containing gas; the middle, a limpid serum; and the deepest, greyish in colour and pulverulent. Microscopic examination showed no traces of any profound lesion of the stomach, no muscular fibres, no sarcinae, no starch-grains, no needles of the fatty acids. He was relieved by the emptying of the stomach, and could better tolerate an examination. This revealed a tumour, not well circumscribed, extending from the pylorus towards the stomach, smooth, resisting, elastic, and not movable by the hand, but following the up and down movements of the abdominal wall. It did not seem to be affected by the movements of the diaphragm. The area of stomach-resonance was perceptibly diminished after the use of the pump, showing that the viscus preserved its contractility. He was kept under observation for a few days, and it was noticed that, when he did not vomit, and the food remained in his stomach for ten or twelve hours, besides the sensation of an obstacle to the passage of the food, which he plainly felt, the epigastric region became swollen and tense; there were eructations, and sometimes an acid taste in the throat, and the peristaltic movements of the stomach could be seen through the walls of the belly.

The diagnosis lay between a relapse of the supposed ulcer, idiopathic enlargement from gastritis, and pyloric obstruction; and, as the symptoms pointed to the latter, the further question occurred whether the obstruction proceeded from cancer or from chronic causes, such as cicatrization or simple stricture. The long course of the symptoms and the persistence of the obstacle seemed to exclude cancer; since, in malignant disease, the patient usually suffers from cachexia and dropsy, ushering in death from exhaustion, in a far shorter time, perhaps twelve to fifteen months, while this patient had been suffering for five years, without showing any such symptoms. Besides, though obstruction is an early symptom of carcinoma, it generally yields after a time, as the cancerous tissue begins to disintegrate.

The operation was performed on September 14th, 1882, after the stomach had been washed out with an alkaline solution. The incision was made on the right of the median line for fifteen centimetres (about five inches), the upper and inner end being about four centimetres below the xiphoid cartilage, the lower and outer end three centimetres from the cartilage of the ninth rib. The muscles were divided, and the hæmorrhage was stopped before the peritoneum was opened. Some difficulty was experienced here, on account of the great omentum being found folded upwards, thickened, and adherent to the parietal peritoneum, and some care was required to detach the adhesions. The omentum was also adherent to the pylorus and right half of the anterior surface of the stomach; and it was this adhesion and thickening of the omentum that formed the tumour, which was felt through the abdominal wall. These adhesions having also been separated, the stomach was set free, and was then drawn out of the wound as far as necessary, and the pylorus was felt to be thickened, and of a fibrous hardness. The coats of the stomach were then lifted up into a transverse fold, and a cut made through them with strong scissors midway between the two curvatures, about three centimetres from the pylorus; and it was found necessary to enlarge this cut to six centimetres, on account of the contraction and hypertrophy of the muscular coat. The coats of the stomach bled abundantly, and this hæmorrhage was repressed by means of hæmostatic forceps of a T-shape. Then the right forefinger was introduced, and the pylorus examined. It was found very hard and prominent, and its orifice appeared closed. No force that could be safely used succeeded in dilating it, till the left index finger was also introduced and employed to steady the pylorus. When this was done, the end of the right forefinger was gradually squeezed through the aperture. Then the finger was used to hook down the pylorus towards the abdominal wound, a manœuvre which enabled the operator to get the left index also through the pylorus. But it was still exceedingly difficult to effect any separation of one finger from the other, so great was the resistance, not only of the sphincter itself, but also of the coats of the stomach and duodenum. The attempt at dilatation threw the muscular fibres into spasmodic action, which quite overcame all the force that could be exerted. Three such attempts were made in vain, but then the pylorus began slowly to yield to the force employed, which was very considerable. At length a sensation was experienced "showing that the tissue was so far distended that it could not obey the dilating finger further without being torn." The fingers were now kept apart for a short time, and the spectators noted that one finger was about eight centimetres (more than three inches) distant from the other.

The wound in the stomach was then sewn up,² the viscus returned

² The method of suture, I think, need not be described. In the first case, a method was used which is called that of "Gely," in the second and subsequent cases that of "Appollito."

into position, and the abdominal wound united. The whole proceeding lasted thirty-three minutes. The patient felt no inconvenience on waking, except a little burning sensation in the region of the wound, and thirst, which was relieved by giving him small pieces of ice. In the evening, he felt so hungry and weak, that he was allowed the yolk of an egg beaten up with Marsala wine, of which a teaspoonful was given every half-hour. The temperature remained all day at 37° Cent. (= 98.6° Fahr.); pulse 72; respirations 26. He felt comfortable, and had a natural appetite. He was fed for the next few days on eggs and a little wine, on the fourth day he had a little thick soup, and on the fifth day was allowed to eat some chicken. On the eighth day, the abdominal wound was found united by the first intention, and some of the sutures were removed. From this time a meat-diet was allowed. Sixteen days after the operation (September 30th), he got up for a couple of hours, and began rapidly to recover strength and gain flesh. On September 12th (two days before operation), he was weak, lean, wretched-looking, and weighed 51 kilogrammes (112 lbs.). On October 30th, he weighed over 61 kilogrammes (134 lbs.), and his face was cheerful and composed.

Five months after the operation, at the date of publication of Signor Loreta's paper, the man was in perfect health, and doing his ordinary work.

Another similar case is related in the same treatise, the patient being a young man aged 18, who had suffered more or less for seven years. In the following treatise (*On Instrumental Dilatation of the Esophagus*), Signor Loreta mentions that he had then operated on two other cases; and, in a letter written in the month of January 1885, he informs me that he has operated on two more, and that all the patients have recovered, and remain well up to the present time. As it is now more than two years since the first operation, this seems to render it certain that the dilatation remains permanent. On this point, Professor Loreta says that he relied on his experience of digital dilatation of cicatricial structures of the anus, in which a permanent cure always results if the operation be performed under anæsthesia, very slowly, and the force gradually exercised until the sphincter is dilated to the extreme, by forcing the two fingers either to each tuber ischii, or to the pubes and coccyx. After such slow dilatation, the sphincter will recover its functions, and will not recontract; while, after too rapid dilatation, its fibres will probably be torn, or contused here and there, and the injured part will inflame, causing fresh cicatrization, as is the case also in urethral stricture after mechanical dilatation. He refers to Dr. Otto Roth as having proved, by microscopic examination, the fact that the muscular fibres, after extreme exhaustion, undergo a degenerative process, and are then reproduced.

This operation, then, is intended to replace the excision of the pylorus in cases where the obstacle is from slow cicatrization or chronic stricture, which will yield to dilatation.

The diagnosis is one of the most interesting points, and on this head we have the following indications.

The stomach is much dilated, the patient greatly emaciated. This may be due to many causes, but the dyspepsia associated with typhus, puerperal fever, tuberculosis, alcoholism, diseases of the liver and of the heart, may be excluded. Cancer may be excluded, by the length and course of the symptoms. The task remains to distinguish the dilatation which is due to pyloric obstruction from that due to idiopathic gastritis.

In the first place, Professor Loreta calls attention to the fact that the dilatation is not necessarily in proportion to the gravity of the symptoms; but that an enormously dilated stomach may digest in a perfectly regular way, while very ordinary distension may be accompanied by extremely acute symptoms. He attributes little value to the methods for ascertaining the amount of distension, proposed by Wagner, and Ziemssen (that is, to introduce effervescent powders), by Piorry, Canstatt, and Penzoldt (that is, filling the stomach with liquid, and then immediately pumping it out), or the methods of sounding prescribed by Penzoldt, Leube, and Schreiber. Much more value, according to him, is to be ascribed to the chemical and microscopic examination of the contents of the stomach, as proving whether the dilatation is due to mechanical causes, or to a profound structural lesion; which lesion may be idiopathic, or combined with other diseases of the system, or of the stomach itself. The matters rejected, or extracted, from the stomach are to be left in a glass vessel, and soon separate into the three strata mentioned above; an upper, of mucus containing gas-bubbles; a middle, of limpid serum; and a lower, either composed of "a granular humour greyish in colour, or mixed with fine detritus of food imperfectly digested. In the first case, the grey sediment consists of chyme, well elaborated by the digestive activity of a healthy stomach, which also retains its expulsive power, but in consequence of some mechanical obstacle, is obliged

to empty itself by the œsophagus. In such cases, it is noticed that the other two strata are formed by a very abundant serous liquid and very little mucus floating above it. And further, it will be learned from the patient that, though the dyspepsia causes other sufferings, there are no pains in the stomach, acidity in the throat, nauseating fetid eructations, intestinal colic, or constipation, alternating with diarrhoea. The patient will add that, as soon as he has vomited, he feels appetite, even hunger, so that he eats any food that is given him; he will say besides, that, in spite of eating copiously, his bowels act little and rarely, and that his nutrition and his powers, both physical and moral, are gradually becoming weaker. On the contrary, when the deep layer of the vomited matters contains much detritus of undigested food, and but little chyme, it is noted that the middle serous layer is not limp, but is rendered turbid by the lighter particles of the undigested food swimming in it, and the superficial mucous layer is abundant, and emits a bad smell. Patients of this sort will relate that they have suffered from pains in the epigastrium, and have been troubled with acid foul eructation, that they suffer often from stomach-ache and diarrhoea, that they obtain little or no relief from vomiting, and finally that they are indifferent to food, or even loathe it. In these patients, on chemical analysis of the vomit, the albuminoid substances are found unchanged or nearly so, and the reaction is usually neutral or alkaline, rarely acid; while in those of the first kind the reaction is always acid, and it is rare to find any trace of albumen or of the peptones. In the mechanical dilatation, the microscope gives negative results, while it displays the residue of incomplete digestion as well as the products of bad digestion, in the idiopathic form, and in those secondary forms which depend on a general infection of the system, wherein the system is so altered as to lengthen to present the characters of the gravest cachexia."

The writer goes on to explain these differences in the character of the contents of the stomach by the fact that, in the simple mechanical obstacle, the coats of the stomach being uninjured, gastric digestion goes on, and the stomach absorbs the peptones, so that the patient wastes much more slowly, and, even when most emaciated, does not present the aspect of real cachexia; nor does the presence of food in the stomach cause pain or colic, or intestinal catarrh or diarrhoea, all which symptoms arise, in cases of the other kind, from bad digestion of the aliment, as it passes into the bowels. And, lastly, the same considerations show why the sufferers from idiopathic dilatation cannot enjoy or tolerate food, while the others preserve a good appetite and a keen taste.

In the idiopathic form, the structure of the mucous membrane and the glands is especially affected, while in the mechanical it is intact, at any rate, for a long period, while the muscular coat is hypertrophied.

It is possible, however, that the mechanical form may give rise ultimately to disease of the glands and mucous coat, so that the mere examination of the vomit, without attention to the history, might lead one into error.

The conclusions to which Professor Loreta comes are as follows.

1. Dilatation of the stomach may be produced by three different kinds of pathological action—by chronic gastritis, by various organic maladies, as well as by many mechanical causes, and by a combination of these processes (idiopathic, secondary, and mixed forms).

2. In the treatment of gastric dilatation, the first step is to distinguish the idiopathic from the symptomatic, and to distinguish, amongst the latter, those cases that depend on obstruction to the passage of the food.

3. When physical, chemical, and microscopical examination gives a positive result, it furnishes the diagnostic signs of the idiopathic and secondary forms which are to be treated by the resources of the *Pharmacopœia*; when the results of such examination are negative, it signifies that the dilatation is simple or mechanical, and curable by surgery.

4. Finally, this mechanical dilatation of the stomach is not so rare a disease as has been believed; nay, it occurs rather frequently. This deduction rests on the consideration of the numerous causes which produce it, and on the statistics of the operations for resection. The affection is worthy, therefore, of the consideration both of the physician and the surgeon.

With reference to the frequency of this mechanical dilatation, Professor Loreta says, in the letter to which I have already alluded, that since his operations, his pupils and assistants engaged in *post mortem* examinations have, on many occasions, discovered that cases diagnosed as carcinoma of the stomach have turned out to be merely instances of a slow inflammatory process in the pylorus, causing sclerosis, rigidity, and stricture.

II. Dilatation of the *Œsophagus*.—The next treatise, published

the following year (January, 1884), deals with the instrumental dilatation of strictures occupying the lower part of the œsophagus and the cardia, as a substitute for gastrostomy. In the introduction, he mentions that he had then operated on two other cases of constriction of the pylorus with equally good results. After this follows a short summary of the proposal and history of gastrostomy, showing its almost uniform fatality, and the short period of life which it has procured under the most favourable conditions.

In the course of this narration, he observes that attempts have been made to dilate the œsophageal stricture, when cicatricial, from the gastric fistula, and that one successful case is recorded (in the practice of a surgeon named Bergmann) in which the stricture was thus successfully dilated, the stomach detached from its adhesions to the wall of the belly, and sewn up, and the patient thus radically cured.

He then goes on to relate two cases, one of cicatricial, the other of spontaneous, but probably innocent, stricture of the cardiac portion of the œsophagus, in which he first practised his method of operating. The patient, in the first case, was a young man, L. Bertini, aged 24. In November, 1882, he had by misadventure swallowed a solution containing a caustic alkali, mistaking it for some medicine which he had to take on account of a pulmonary affection. This gave rise to violent inflammation of the œsophagus, lasting about three weeks, and followed by increasing difficulty in swallowing, till, eleven months after the accident, he could not swallow any solid food, and liquids passed very slowly, often causing vomiting. Attempts were made to dilate the stricture by bougies, but they were unsuccessful, and at last it became impossible to pass any instrument. The point at which the sound was arrested seemed to correspond with the fourth dorsal vertebra. At last the patient became entirely unable to swallow, and his emaciation had become extreme. The following operation was accordingly performed in October, 1883, eleven months after the injury. An incision, about fifteen centimetres (five inches) long, was made through the abdominal wall from the xiphoid cartilage downwards, and somewhat to the left. When the lower aponeurosis of the rectus muscle had been reached, the hemorrhage was arrested, and then the aponeurosis and the parietal peritoneum were opened. Some difficulty was here experienced from the contracted condition of the stomach, and the way in which the liver lapped over it; but the operator at length succeeded in drawing the greater part of the stomach out of the wound, and a longitudinal incision was made through its walls between the two curvatures, having its upper end as near the cardia as possible.

The next step was to find the orifice of the œsophagus, in order to introduce the dilator; but this involved considerable difficulty, and the search was interrupted by vomiting of a considerable quantity of bile, which regurgitated from the duodenum into the stomach. At length, by searching with the left index finger between the concave surface of the liver and the small curvature of the stomach, the end of the œsophagus was found. Then the distended stomach was kept drawn downwards by an assistant while the operator introduced the dilator, guided by his forefinger, into the cardiac orifice, from whence it easily slid past the stricture. This dilator, Signor Loreta says, is something like that which Dupuytren introduced for lithotomy, only larger, measuring about eight inches from the joint to the end of the blades, and so set that the blades would not separate more than five centimetres; with the blades dilated to this extent, the instrument was run up and down the œsophagus four times. Then the wound was sewn up, and the stomach returned into the abdomen. The patient rallied well, and, six hours after the operation, swallowed some soup with the yolk of an egg mixed in it, to his great joy, since it was twelve months since he had been able to do more than swallow by mouthfuls. Recovery was complete in about eighteen days; but, on the fourth day after the operation, he was seized with an attack of dyspnoea. The respiration rose to 45 and the pulse to 140, but the temperature never rose more than 2° C. There was an abundant secretion of mucus from the trachea and bronchi, and the patient had to spit it out very frequently, finding some pain in doing so from the sutures which united the abdominal wound. These symptoms lasted till the ninth day, and then ceased. The author doubts whether the symptoms were caused by irritation of the sympathetic plexuses of the œsophagus by the dilating instrument, by paresis of the vagus, or by some exudative hyperæmic process, which latter explanation seems more consistent with their not having commenced till the fourth day.

Twelve days after this first case, he performed the same operation on a young woman who had enjoyed perfect health, except that, eight years before, she had begun to experience difficulty in swallowing, with no assignable cause. This had increased to a terrible

extent, so that no solid food would pass; but she took fluid nourishment twice a day, and always vomited about the half of what she had taken in about four hours. The vomiting seemed to come from the œsophagus, not the stomach; and Signor Loreta believes that the œsophagus was a good deal dilated, and that the sojourn of any quantity of food in the tube ultimately provoked the muscular fibres to act, while in the meantime a certain proportion of the fluid had filtered down. No bougie could be got beyond the stricture, though repeated attempts had been made during two years. The nature of the disease was quite uncertain; it could not be cancerous, and there were no signs of syphilis. As conjectural causes were suggested, a tumour in the posterior mediastinum; a deviation of the œsophagus, caused by abnormal structure and function of the muscle called broncho-pleuro-œsophageus; a permanent contraction of the circular muscular fibres, with consecutive fibrous degeneration, or more probably, a hypertrophy of those fibres; a new formation of connective tissue under the mucous membrane, with cirrhosis from low inflammation (Rokitansky's *annular induration of the cardia*); or, finally, the cicatrization of an ulcer in the cardiac region of the stomach. The only thing certain was, that the obstacle was less than two inches from the stomach, and that possibly the cardia itself was contracted. The girl had fallen into a condition of the utmost prostration, and had quite abandoned all hope of life, till she heard of the former operation, when she was so urgent to be operated on that it seemed necessary to gratify her, though otherwise Signor Loreta would have been glad to await the definite issue of that case. The operation was exactly like the former, and was followed, like it, on the fourth day afterwards, by the same disturbances of circulation and respiration. The symptoms were exactly the same, and lasted just the same time. She recovered completely in twenty days; but the recovery might be said to date from the very day of the operation, on which day, equally to her surprise and delight, she swallowed a considerable quantity (200 grammes = about 7 ounces) of liquid. From that time, her spirits began to return, and she continued from that time to take both liquid and solid food easily. At the date of the paper (three months after the operation), she took food of all kinds with perfect ease, and was quite well. No instrument had been passed by the mouth.

Professor Loreta points out, however, that although there was the best reason to hope for permanent cure, he had not the same confidence in these cases of instrumental dilatation as in those of digital dilatation of the pylorus; since, in the latter, the surgeon's fingers experience a peculiar sensation, which shows him when the muscular fibres have been so far stretched as to have entirely lost their tonicity and power of resilience, in which condition they must necessarily go through a process of fatty degeneration, followed by reproduction. This sensation being of course absent in the case of mechanical dilatation, the effects obtained may be only partial and transitory, the tissue being, in some parts only, imperfectly distended, may recontract and reproduce the stricture. In the first case (that of Bertini), in order to obviate any such recontraction, an elastic bougie had been introduced daily so as to complete the dilatation which the instrumental divulsion had commenced. In such cases, it may also be possible to effect instrumental dilatation from the mouth; and Professor Loreta describes a dilator which he has had constructed for this purpose, and which can also be converted into an œsophagotome, or instrument for incising a stricture in the œsophagus.

The conclusions to which Professor Loreta comes are as follows.

1. Instrumental dilatation of the œsophagus, through a wound in the stomach, seems much preferable to gastrostomy, since the former effects a radical cure, while the latter leaves the stricture uncured, and the patient is in a hardly better condition than he was before, in consequence of the troubles connected with the gastric fistula.

2. Operations on the stomach are of good prognosis, judging both by the results of the other operations, and by the recovery of Bertini, a patient already suffering under pulmonary consumption.

3. May it be possible to substitute electrolysis for dilatation?

After the reading of his paper, Professor Loreta exhibited to the Society two patients—one, Erminia Boschi, aged 26, the second of the two patients whose cases are here related. (The first patient, Luigi Bertini, was unable to attend, being confined to bed with his cough.) She was well nourished, and her face plump, rosy, and animated; her power of deglutition perfect, and her health quite re-established. The other, Elettra Lombardi, aged 21, was still suffering from œsophageal stricture. She was weak, melancholy, pallid, and could hardly swallow—exactly in Boschi's condition before operation. She was operated on shortly afterwards, and recovered completely. Professor Loreta has also operated with equal success in a fourth case, as have two other Italian surgeons; Dr. A. Catani, of Florence, in the case of

a lady 34 years old, whom Professor Loreta saw, seven months after operation, in perfect health; and Dr. G. Frattina, of Brescia, on a man, of whom the only record is that the operation was successful.

I ought possibly to apologise for bringing under notice a subject on which I have no personal experience. My excuse must be that the subject is a very interesting and important one; and, as far as I have been able to ascertain, is very little known in this country. If subsequent experience of these operations should be favourable, it must be obvious how great an advance will have been made in what we now call "peritoneal surgery;" and how we shall be able to hold out hope, not only of relief, but even complete restoration to health, in circumstances which are at present entirely desperate. I have no doubt that Professor Loreta's operations will very soon be tested by English surgeons. I have been told that the dilatation of the pylorus has been performed by Billroth, but am not aware that he has published anything on the subject.

FURTHER REPORT OF A CASE OF NON-MALIGNANT CONstriction OF THE PYLORUS: USE OF THE SIPHON-TUBE THROUGH FIVE YEARS.

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IN the BRITISH MEDICAL JOURNAL, February, 1881, I reported a case in which washing out the stomach, for the purpose of relieving the effect of constriction of the pylorus, was practised under circumstances of a character unusually favourable for illustrating the beneficial action of that method of treatment. I refer to the case again at the present time, because I am able to report the present condition of the patient, a man now aged 55.

Mechanical obstruction to the natural passage of food from the stomach is so generally of a progressive nature, and often most rapidly progressive, that the period during which this remedy (washing out the stomach) has a chance of exhibiting its beneficial operation is very limited.

In my present case, the obstructing agent, apparently some cicatrix or adhesion, seems to have been stationary during a period of eight years; at least, no evidence of increase in the narrowing of the pyloric orifice has developed itself. As a consequence, the case has been reduced to one simply of retention of food within the stomach, with the result of such changes taking place in the food contained within the viscus, through fermentation of one form or another, that nutrition was so seriously interfered with as to render death by inanition an almost certain and not very remote event.

It does not often happen that we see the effect of pyloric disease, in damaging the nutrition of the body, clearly presented and maintained for so long a time; and seldom that so clear an illustration of the action of the remedy in question, free from complications, is presented. By simply cleansing the contents of the stomach through washing out with warm water, and thereby removing every impurity which could act as a ferment on the fresh food introduced, digestion was restored, and the patient put on flesh with surprising rapidity; and at a later period, by means of the same process, irritative products and fermentive changes were cleared away, severe pain was relieved, and, no doubt, gastritis was averted.

Without noticing the early symptoms caused by the disease which occasioned the pyloric obstruction, I may say that the process of narrowing seemed to have set in between two and three years before the patient came under my care, in the Birmingham General Hospital, in June, 1879. At that time, the stomach was largely dilated and distended, and the patient was suffering under the effects of deficient alimentation, but from no other symptoms of importance. He had lost 54 lbs. in weight. Washing out of the stomach was at once commenced, together with careful adaptation of food, both as regards quality and time of administration; recovery of flesh at once began to take place, and seventy-six days afterwards, when the patient left the hospital, he had recovered 36½ lbs. of his lost weight.

He returned in the following November 34 lbs. lighter, with renewal of his symptoms, in consequence of his having neglected the precautions which he had been directed to observe. Renewal of the treatment again restored the digestive function; he left with improved nutrition, and in the following February (1880) was within 18 lbs. of his normal weight.

The patient had fallen in with the method of treatment by the siphon with perfect readiness, and, after the second day, had performed the operation for himself; on his leaving the hospital, he had been directed to repeat the operation daily. It was his neglect of these