Surgery of the stomach, with report of cases : one case of gastrostomy, two cases of gastrectomy / by Albert Vander Veer.

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SURGERY OF THE STOMACH, WITH REPORT OF CASES.

ONE CASE OF GASTROSTOMY. TWO CASES OF GASTRECTOMY.

Read at a Meeting of the Medical Society of the County of Albany, October 14, 1902.

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Mr. President and Gentlemen of the Society:

As one travels through the Middle and Western States of our great country, strong impressions are received in noticing the appearance of the people of the prosperous and non-prosperous cities and towns you pass en route. The prosperous towns give you a class full of earnest work, great enthusiasm, absolute faith in what they are undertaking, and their belief in being able to accomplish what they have in hand. This is born of the success which has come to them, they having taken the tide of business at the right time, and doing that which was demanded in an intelligent way. The opposite condition is equally apparent when we come in contact with the non-prosperous residents of other cities and towns.

This is the illustration I would make: That as a profession, at present we belong to the prosperous, successful class. Especially on the surgical side has the art of surgery and its operative technique advanced in such a manner that all those who practice it, on a scientific basis, realize a degree of confidence in their ability to accomplish certain ends, not unlike the residents of the rapidly-growing, and continuously prosperous citizens of the sections of country to which I have referred.

When I look back, and remember the surgery of the abdomen, for more than two decades after my graduation, I can scarcely realize the advances that have been made in this department of our profession.

It is true that operations had been done upon some portion of the intestinal tract, with now and then a successful result. Beaumont's case of gastric fistula had been studied from the standpoint of the physiologist, with great benefit to the profession, but it was a long time after this before an imitation was made of

operative intervention, and my recollections of gastric fistula, after having read fully the history of Alexis St. Martin, date from November, 1874, when I attended a clinic in London, conducted by the late Dr. Murchison. He presented three cases of malignant disease of the stomach that had resulted in fistulous openings, and which were dilated upon by the lecturer. He was very clear in his remarks that much good would surely result from the operation that had been done a few times, but contemplated more recently by the, then, operating surgeon, *i. e.*, making a gastric fistula for relief of stricture of the œsophagus, that could not be treated otherwise. Very soon after this I was impressed by some of the reports made by surgeons in the London hospitals, who had persuaded patients to consent to this operation for comfort, maintenance and continuance of life.

About this time one of the best articles on the subject of feeding the patient through an artificial opening, in a satisfactory manner, was presented by Dr. Pooley, of Columbus, Ohio, a young surgeon who promised a brilliant career in the work he was then doing, and who gave us a clearer definition and classification of the terms gastrostomy and gastrotomy. From this time on operations upon the stomach have developed with the same rapidity, the same certainty of success as have operations upon other portions of the abdominal cavity, and no one can deny but that some of our most brilliant advances in surgical practice have been in connection with attacks upon this one time much-dreaded serous cavity.

Billroth's masterly operation of pylorectomy developed along about this time, in the decade between 1874 and 1884, attracting the attention of thinking, operating surgeons to that extent it seemed as though it was destined to be a definite advance in surgery, and one of the fixed operations, but even greater advances than this were to be accomplished. We were just upon the eve of more brilliant achievements by other operators, which were not long in being developed by the thoughtful, earnest surgeons of the time. At last we had special works upon the subject of gastric surgery, and one who is abreast of what is being done at the present time, cannot but rejoice, and feel a degree of comfort in his profession, when he takes up such a volume as is presented by Mayo Robson on *Surgical Treatment of Diseases of the Stomach.* Here we find a book that presents the subject of my few remarks well up-to-date, here are operations described and

results given in such a manner we realize that it is possible to do almost any operation upon the stomach.

Resections are not so very infrequent, and treatment of gastric ulcer is an established procedure. Billroth's operation is superseded—and with better results in many cases—yet an operation that requires careful surgical skill, and intelligent manipulation of the parts, *i. e.*, gastrointestinal anastomosis, when the pylorus is put absolutely at rest, another opening made in the stomach, and food permitted to enter the intestinal tract without causing any irritation of the pathological surfaces that may present.

A few years ago the profession was deeply impressed, and the world-at-large caught up the seemingly very extravagant operation for complete removal of the stomach, believed to be quite impossible, as the critics considered the first report of the operation. There are many lessons to be learned from these advances that have been made in all that pertains to surgery of the stomach. Perhaps there is no part of operative surgery in which the operator has to keep in mind so clearly the best procedure, as when he opens the abdominal cavity and attempts to do an operation upon the stomach. He may have ever so clearly in mind what he believes to be the best operation before the incision is made but not infrequently conditions present, when the stomach is exposed, necessitating an entire change in his procedure. He may think it best to do a pylorectomy, he may think it best to do a pyloroplasty, he may think it best to do a resection, or it may be better still to do a gastrointestinal anastomosis, or a gastrectomy. For all these conditions he must be prepared.

For many years surgeons in operating upon the intestinal tract, for the relief of obstruction, resulting from a cancerous mass about the rectum, have been greatly impressed with the arrest of the pathological condition, in some cases quite a marked obstruction being relieved, and the tendency for the parts to heal. This is well illustrated in operations upon the stomach. By putting the pylorus at rest, where there is a simple ulcer or fissure existing, a malignant growth, or quite marked stenosis from fibrous stricture, the patient improves, the pathological condition yields to treatment, and complete recovery takes place in a certain number of cases. This applies more particularly to the operation of gastrostomy, in some cases of malignant stricture of the œsophagus, or of fibroid stricture, in a more or less inflammatory condition.

It is not my intention to present many clinical cases, but the following are so interesting and instructive that I wish to here report them for the first time:

Case 1. Mrs. H. H., æt. 56; housewife; native of U. S.; residence, Middleburgh, N. Y. Patient entered the Albany Hospital November 18, 1901; discharged December 16, 1901. Diagnosis, carcinoma of œsophagus. Treatment, gastrostomy. Result, improved.

Personal history. Patient complains of inability to take food.

Family history. Negative.

Past history. Patient always quite well until two or three years ago, at which time she began to suffer from indigestion, and of late has been constipated.

Present illness. For past few months patient has had great difficulty in swallowing food. This has grown progressively worse until upon entrance to the hospital only liquids could be taken, and even then caused pain, at times the patient not being able to swallow at all. There had been a steady decrease in weight during past few months. Increase in cachexia and anæmia.

Physical examination. Palpitation. Below liver, but not movable by respiration, there is a regularly-shaped mass, not doughy nor tympanitic. Passing œsophageal tubes an obstruction is marked just above the cardiac end of stomach, through which only the smallest bougie passed, giving her much distress. By aspiration 100 cubic centimetres of undigested material was removed from the sac formed above the constriction.

After a careful study of her case, I was led to the conclusion that she undoubtedly had a malignant growth at the lower end of the œsophagus, just above the cardiac end of the stomach, and that the only course to pursue was to establish an artificial opening in the stomach—a gastric fistula—so that after a time she could feed herself, and in this way obtain sufficient nourishment to afford comfort. She was strong enough to bear the operation, and on November 27, 1901, I made an incision parallel with the ribs, on the left side, and just to the left of the median line, bringing the anterior wall of the stomach, which was somewhat contracted, into the incision. Then I made an opening in the stomach, large enough to admit the largest-sized rubber catheter, folded the walls of the stomach over this, attached the anterior wall of the stomach to the under surface of the abdomen, and to the sides of the incision, and fed her through this tube. Patient was comfortable after the operation, no untoward symptoms, took considerable food, but did not gain in strength and on December 12, 1901, I wrote Dr. Rossman, her family physician, as follows:

My dear doctor:

I do not feel quite happy over the condition of Mrs. H. There is a steady, continuous contraction of the stomach going on, the growth is certainly increasing, and we are not able to sustain her as well as I could wish. She is in very good condition to be moved, and, perhaps, if they are to get her home, it should be done within the week. The case is proving more serious than at first indicated.

She was accordingly moved from the hospital to her own home in

Middleburgh, December 16, 1901. To my great surprise, I received the following letters from her husband:

December 31, 1901. Mrs. H. is improving nicely; sits up in a chair two or three times a day, etc., etc.

January 8, 1902. Mrs. H. is still improving; has become hungry, wishes for something to eat; almost impossible to control her. She is taking liquid through her mouth; can take a tumblerful of milk, also a dish of ice cream. Has eaten a half slice of bread and butter, that she secured from the nurse when I was away from home, etc., etc.

February 3, 1902. Mrs. H. is still improving; can eat like a pig, and almost impossible to control her appetite. She can take three meals through the mouth of solid food, and retain same. There are times, however, when she has a choking in her throat, just about the location of Adam's apple. She thinks the stricture has traveled back to the throat.

The patient continued in about the same condition and came to my office September 3, 1902, presenting the following condition: Had gained fifteen pounds in weight, was much stronger and took a normal amount of nourishment, mostly in the form of liquids. Tube still in position only being taken out to be properly cleansed. Part of food is taken through the tube, part per mouth. In every respect Mrs. H. is greatly improved. Bowels are regular, and the mass does not seem to have enlarged any.

The operation for opening the stomach, for treatment of fibrous strictures of the œsophagus is one of the best surgical procedures we are called to perform. I am satisfied that much good is to result, and life will be prolonged a greater number of years, in the sum total, by the conservative operations we do upon the stomach, than in the too radical ones.

The operation of gastrectomy, while brilliant in many respects, and reflecting credit upon the operator, can be applied to exceedingly few cases. Although the results have been studied carefully, yet it is a question whether some of these cases would not have lived longer, and been more comfortable, had one of the modified operations been done. However, when one opens the abdominal cavity, and though prepared to do a certain operation upon the stomach, he sometimes finds the condition such that gastrectomy seems preferable. It is so comforting to the patient and friends to know that the malignant growth has been completely removed, that this in itself is, at times, an incentive to the surgeon to do his utmost in relieving the sufferer.

The following case will illustrate these remarks somewhat:

Mrs. B. S., æt. 42; married; housewife; residence, Albany. N. Y. Entered Albany Hospital February 12, 1900.

Present illness. Over a year ago, when eating solid food, would afterwards vomit, but liquids produced no distress, nor did she have any pain.

During past year no solid food of any kind taken. Occasionally would vomit while on a strictly liquid diet—not much in quantity. Patient lived mostly on a milk diet. For past two months noticed a bunch in left side, which gradually increased. A tumor, lobulated, size of patient's fist, just above umbilicus, a little to the left of median line, could easily be made out.

Past history. Good. Six children, four living, no miscarriages, menstruation regular.

Family history. Four brothers and four sisters alive and well. No history of malignancy or tuberculosis. Patient in hospital for observation until operation, and vomiting more or less continuously. Diagnosis, carcinoma of stomach, omentum and probably involving the transverse colon. Patient and hubsand readily consented to an exploratory incision. If the diseased mass could be removed successfully we were to proceed with the operation. Previous to the operation one grain of calomel, in divided doses, had been given, followed by two A. S. and B. pills, which produced a good movement of the bowels. Usual intestinal enemata. Pulse previous to operation never above 100, with slightly increased respiration, and temperature normal. Patient somewhat restless the night before the operation.

Operation, February 20, 1900. Gastrectomy. Median incision between ensiform cartilage and umbilicus. A hard mass occupying the greater curvature of the stomach and cardiac end found, also a few adhesions, but neighboring glands not infiltrated. Omentum ligated in sections, stomach loosened from all attachments, duodenum and pyloric end of stomach grasped with forceps, section made well below tumor, and stomach gradually worked out of its bed up to cardiac end, cardiac end of œsophagus grasped, stomach removed, duodenum joined to the end of œsophagus by means of a medium-sized Murphy button, and very little blood lost during the entire operation. There was considerable tension and the œsophagus was loosened by lateral incision of the diaphragm. Wound closed in usual manner. Anæsthetic fairly well taken, and operation lasted one and one-half hours. Returning from operating room patient was cold, with uncomfortable perspiration over surface of body, but this was relieved by proper treatment. Pulse 126. She had difficulty in breathing, not being able to take a full inspiration. At 5 p. m. had reacted well, much warmer and pulse of good volume. She complained of pain through abdomen and was turned on her side, with a pillow firmly applied to back. Rectal enemata well retained. One-thirtieth grain of strychnia continued every three hours hypodermatically. Patient slept at intervals, feeling quite comfortable, pulse at 10:45 p. m. 118, with good volume, and she was very quiet. At 11 p. m. she voided four ounces of urine. At 11:30 p. m. she had a sharp pain in right side of abdomen, and at her earnest desire position was changed, when she felt much more comfortable. At 1 a. m. belched up a little gas. No nourishment allowed, but mouth rinsed frequently. At 1:10 a. m., after sleeping ten minutes, awakened with a sudden start, giving herself a severe movement of the body, and from that time on her pulse grew weaker, more rapid, and while all possible remedies were employed the patient grew worse, and died at 3:20 a. m.

Post-mortem examination showed that the attachment between the duodenum and œsophagus had loosened, the upper segment of the Murphy button having separated in its attachment to the œsophagus, and allowing the small amount of fluid contents present to escape into the peritoneal cavity.

The following is the report from the Bender Laboratory: Specimen consists of all the stomach except a small portion of the lesser curvature in the pyloric region. It extends as far as the œsophageal orifice on the one hand and to the edge of the incision on the other. Specimen removed measures sixty-three centimetres in length, eight centimetres from the superior to the inferior curvature. The walls feel very much thickened, are hard, and the peritoneum along the entire lesser curvature is infiltrated with growth which gives it a rough appearance. On opening the stomach fully three-fourths of the mucous membrane and walls of the stomach are involved in a new growth. This new growth in the region of the lesser curvature, shows rather extensive ulceration. The growth in places is distinctly nodular and has an overhanging edge in the region of the lesser curvature. The growth is of a very fibrous character. The mucous membrane of the pyloric portion of the stomach is somewhat congested—is otherwise normal. The stomach wall in places is as much as three and one-fourth centimetres in thickness. The wall of the stomach in the uninvolved portion measures four millimetres and the rugæ is well marked. In the involved portion they are almost entirely absent. There is a small portion of the omentum attached to the stomach, which contains a number of enlarged, hard glands, many of them as much as one centimetre in diameter, and all of them showing extensive carcinomatous involvment. There are also some glands in the region of the lesser curvature which show extensive involvment.

On section the superficial portions of the growth are spongy and cellular. The deeper portions show considerable fibrous tissue penetrating the cellular areas, and the growth can be seen extending deep down into the muscle.

Accompanying the specimen there is a portion of a transverse colon, twenty centimetres in length, attached to which is a considerable piece of the greater omentum. The peritoneum of the colon is of normal appearance. The mucous membrane is also normal, as are the walls. The omentum presents a few hard, nodular areas which appear to contain a carcinomatous growth.

Anatomical diagnosis. Medullary carcinoma of the stomach. Extensive involvement of the lymphatic glands, associated with nodular growth in the omentum. Normal transverse colon.

Microscopic. The growth in the stomach is rather diffuse and is associated with a considerable connective tissue increase. It is alveolar in character and consists of small alveoli, filled with cells of an epithelial type and surrounded by a moderately extensive cellular connective tissue stroma. Section of the transverse colon is normal. The lymph glands adjacent to the growth show involvement in the process.

Diagnosis. Carcinoma simplex of the stomach. Metastases to the neighboring lymph glands.

This case is one in which had I been contented to do a simple gastrostomy I would have undoubtedly prolonged the life of my patient, and given her greater comfort, not attempting to remove a growth that extended up so close to the diaphragm, and which implicated the cardiac end of the œsophagus, as afterward shown.

Such are the practical results of careful study of cases, and which every surgeon should consider in repeating operations of this nature.

The next case is one in which the condition was plainly clear, and the indications for a complete operation much more favorable.

Case III. Transferred from medical side by Drs. Ward and Neuman. Mr. H. M., æt. 55; native of Canada; blacksmith by occupation; residence, Turner's Falls. Mass.

Patient entered the Albany Hospital January 1, 1902. Diagnosis, sarcoma of stomach. Operation, gastrectomy. Result, recovery.

Family history. Parents' death occurred at advanced ages—mother of heavy cold, father of pneumonia. One sister and two brothers living and well. One brother died, æt. 28, from inflammation of bowels; one brother, æt. 35, from disease contracted from a horse—probably actinomycosis.

Previous history. Uneventful with exception of pleurisy in 1873, and occasional attacks of vomiting since 1877. Patient presented a hernia, which developed in 1883, and for which he has since worn a truss. Uses tobacco very freely, also a pretty moderate amount of whiskey and beer. Is a hearty eater. Bowels always regular.

Present illness began October, 1900. Pain in epigastrium, more marked between four and five p. m., vomiting any time during the day, and which usually relieved pain. Burning sensation after vomiting, with considerable eructation of gas. Appetite poor since onset of trouble. Vomitus tastes bitter and disagreeable. Bowels constipated; no bladder symptoms. Chilly sensation occasionally at night; no cough, shortness of breath, or night sweats. Has lost about forty-four pounds in weight, and much in strength. Spits blood occasionally since pleurisy, more especially since present trouble began. Vision and hearing poor, but general sensations normal.

Examination revealed breathing harsh at apices, with prolonged expiration, heart dulness beginning at upper border of fourth rib, limited externally by nipple line, internally by left sternal border, first sound at apex extremely loud and second aortic sound exaggerated.

Abdomen. Oval, symmetrical, respiratory movements transmitted; percussion note tympanitic; tenderness in epigastrium; muscular resistence all over upper half of abdomen. Reflexes normal.

Gastrointestinal anastomosis suggested, to which patient readily consented, being desirous of obtaining even temporary relief if possible.

Operation, January 4, 1902. Usual anæsthetic and incision. Entire stomach, which was quite movable, with the exception of about an inch at cardiac extremity, found involved, also surrounding glands. Gastrectomy

thought advisable and carried out. Mesentery tied off with fine silk; stomach clamps applied, and after thoroughly walling off surrounding parts with tampons, stomach was excised at about two inches anteriorly, and three inches posteriorly from the cardiac end, just below the pylorus. Posterior and all involved glands thoroughly removed. Cut ends brought together, sutured with silk sutures, and all raw edges invaginated by peritoneum.

Wound closed in usual manner, one vaginal iodoform gauze tampon left in for drainage, and standard dressings. Anæsthetic well taken, and operation lasted one and one-half hours.

After operation patient at times was restless, weak, highest temperature 102, pulse 126, but he responded well to treatment, and went on to uneventful, complete recovery, the only complication being delirium for a short time after the tenth day, and a stitch-hole abscess. After treatment consisted in giving nothing per mouth for forty-eight hours, although he was occasionally allowed to rinse out his mouth with hot water. At the end of forty-eight hours the dressings were removed and found somewhat stained from drainage from the peritoneal cavity. Part of iodoform gauze drainage removed, and the balance at the end of the fifth day. No unusual treatment called for.

Bender Hygienic Laboratory pathological report, by Dr. Blumer, as follows: The specimen appears to consist of a portion of the stomach wall, the pylorus and a portion of the duodenum. To the specimen is attached a portion of the greater omentum, measuring 13 x 5 centimetres. The entire specimen measures about 20 x 12 x 2 centimetres. The tissues of the stomach wall are the seat of a new growth, which is about one centimetre in thickness. It is thought that the pylorus is included in this specimen on account of the fact that there appears to be a ring of fibrous tissue about which the different portions of the growth are grouped. They have an appearance as though puckered, the apices of the fold centering about this ring. The mucous membrane is for the most part pale, and has a slimy appearance. The inner surface of the growth is slightly granular in appearance, and shows a few reddish hemorrhagic points. On section the growth is found to be firm and homogeneous—pearly white in color. The serous coat of the stomach appears normal.

Anatomical diagnosis. Carcinoma of the stomach in the region of the pylorus.

Microscopical examination. The wall of the stomach seems to be infiltrated by a new growth, which in places has completely destroyed the mucosa which penetrates into the musculature and reaches in some places almost to the serosa. This growth is made up of closely packed cells, which are in the main rounded in shape. The cells are rather large for a tumor of this type, and have a vesicular nucleus and a moderate amount of protoplasm. Many of them show karyokinetic changes. Some of the cells are much larger than the others, and have irregular blood nuclei. A fair number of polynuclear leucocytes are present. There is no alveolar arrangement in the neoplasm. The tumor cells are held together by a small amount of fine connective tissue, and by the remains of the tissues of the stomach walls. The tumor is quite vascular, containing a good many

thin, new formed blood vessels. The peritoneal surface of the stomach shows in one or two places distinct thickening, due to the formation of dense fibrous adhesions.

Revised diagnosis. Round celled sarcoma of the stomach with chronic perigastritis.

Dr. Houle, the attending physician, has kept me well posted regarding Mr. M.'s progress, and patient presented for exhibition at the meeting of the American Surgical Association, Albany, N. Y., June 4, 1902, with the following history: Appetite excellent, bowels in good condition, wound thoroughly healed, patient able to eat any kind of food and in increased quantity. He has gained over thirty-one pounds in weight.

September 13, 1902, his physician writes that on August 1st, Mr. M. purchased a blacksmith shop, is able to work at the anvil, and apparently in full health.