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## EXTRACTION OF A BAR OF LEAD FROM THE STOMACH.

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ON Christmas day, 1854, I was summoned to see S. W. Bates, æt. 32, who, it was said, while performing the feat of running a bar of lead down his throat, had accidentally let it slip, so that it descended into his stomach; but before I left my office, he came in, followed by a crowd. I asked him if he had swallowed a bar of lead. He said he had; and that it was nothing wonderful for him to do, as he had swallowed a number at previous times. This was said in a half waggish manner, and being to all appearances partially intoxicated, and having withal the reputation of being an expert at juggling and sleight of hand, I supposed it to be one of his tricks, and this opinion was strengthened from the fact that he seemed to be *suffering no inconvenience*. I believed it to be a hoax; but to satisfy myself further, I passed a sound down the œsophagus into the stomach, *but could discover nothing*. I sent him away, but in a few minutes afterward he returned, in company with Dr. Cleaves, of this place. After a brief consultation, we again sounded the stomach, but with no better evidences of a bar of lead than before. We told him to go about his business, and if it troubled him to let us know. The next day he went to work, and continued at work four days, when he went home, some six miles from this place, and becoming unwell, sent for Dr. Robertson, of Columbus city.

On Monday, Jan. 1st, Dr. Robertson requested the physicians of this city to meet him forthwith in consultation at the residence of the patient. Dr. Taylor and myself answered the summons promptly. Drs. Robertson, Neal, Cleaves, Graham and Crawford had arrived before us.

The patient was closely examined, and there was found no perceptible external evidence of any foreign body in the stomach; he was comfortable, up and about, and seemed as well as any of us, if we except some paleness, which might have been produced by the

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regimen enjoined. Instructions were given to keep the patient on a low diet, and open the bowels by a saline laxative; and should any untoward circumstances or symptoms supervene, to notify us at once.

Tuesday, Jan. 2d, 4, P.M., summoned to see Bates immediately. Dr. Robertson soon arrived. Found the patient suffering with considerable gastralgia and abdominal soreness; there had been considerable retching and vomiting of a dark, watery fluid; pulse small and tense; great anxiety, restlessness, prostration, and apparent sinking of the vital powers. The bowels had not been moved. He was very sensitive to pressure over the left iliac and inguinal regions. *We were now satisfied that he had swallowed a bar of lead.* We prescribed sulphate of morphia to keep him quiet through the night, and fomentations to the bowels, and left him.

*Operation.*—Wednesday, Jan. 3d. Present, Drs. Robertson, Cleaves, Graham, Taylor, and myself. The patient seemed much as on the previous evening. He had great prostration and faintness on attempting to rise. The patient having been properly placed and secured, chloroform was administered. It produced, at first, some nausea, and he threw up a quantity of black, foetid, watery fluid. As soon as insensibility ensued, I made an incision from the point of the second false rib to the umbilicus, dividing the skin and cellular membrane; thence through the abdominal muscles to the peritoneum, which I laid bare the whole length of the incision. I then made a minute opening at the lower end of the section, through the peritoneum, passed in the director, and with a probe-pointed bistoury divided it through the entire length of the incision. The division of the peritoneum produced a spasmodic contraction of the muscles of the abdomen, and a large quantity of the omentum and bowels was ejected from the orifice. Increasing the chloroform controlled the spasm, and I replaced the bowels as speedily as possible, and passed my hand inward and upward through the incision, grasped the stomach, and immediately *discovered the bar of lead* and its position. It lay in a direction from right to left, the upper end resting against the walls of the stomach to the right of the cardiac orifice; the lower end in the greater curvature of the stomach, to the left of and below the pylorus. As it was impracticable to reach the upper end, I seized the bar between my thumb and middle finger, and with the forefinger on the lower end of it, I retracted it upward and backward, for the purpose of making the incision in the stomach as high up as possible. I then passed a scalpel in, along the side of the forefinger as a director, and divided the coats of the stomach immediately at the end of the bar, making the incision parallel with the muscular fibres, and not larger than to admit of the removal of the lead. I then introduced a pair of long forceps, seized and drew out the lead, and placed the stomach in its natural position. The external

orifice was closed with the ordinary interrupted suture and adhesive straps, a compress applied, and a roller around the body.

The time occupied in operating was twenty minutes. Considerable delay was occasioned by the protrusion of the contents of the abdomen, which had to be replaced before the operation could proceed. As soon as the effects of the chloroform passed off, a quarter of a grain of sulphate of morphia was administered, and the patient left in charge of a judicious medical attendant.

The following are the notes of the subsequent treatment of the case.

During the afternoon after the operation, the patient was very restless; morphia continued, which procured intervals of sleep. Pulse 83, soft and compressible. At 9, P.M., great restlessness; nausea and sinking of the pulse; constant melanotic regurgitation. Prescribed sulph. morphia, gr.  $\frac{1}{2}$ . Pulse rose—became full and tense. At this time, the salts taken on Monday and Tuesday commenced operating; he had seven operations. Pulse softened, and he dropped into a quiet and refreshing slumber. The patient was kept lying on his back. 12, P.M., had a violent attack of vomiting, and threw up about three pints of a dark greenish fluid, mixed with grumous blood; complains of pain in the stomach and bowels; gave him sulph. morph., gr.  $\frac{1}{2}$ ; became quiet, and slept at intervals until daylight; iced elm water as drink.

Thursday, 4th, 10, A.M.—Patient quiet; pulse 85, and moderately full; some thirst and fever; complains of pain in the stomach and bowels; says he feels a sensation as though water was dropping on his stomach. Morphine continued at regular intervals; iced toast water, and iced mucilage, for drink. 3, P.M.—Pulse 85, rather hard. Bled him ten ounces. Continued morphia. 6, P.M.—Complains of nausea, and has frequent alvine discharges; pulse 86, hard; considerable thirst; gave pill of opium. Ordered ipecac and morphia; left powders of opium and acetate of lead, to control the bowels.

Friday, 5th.—Nurse reports a good night's rest; says the pulse ranged through the night from 70 to 75; no operation from 8 o'clock till 4 this morning; stools watery; complains of nausea; pulse 83, soft; tongue white and dry; considerable thirst; slight cough. 5, P.M.—Found the patient complaining of gastralgia, nausea and thirst; frequent alvine dejections; pulse 75, hard and full. 9, P.M.—Vomited; gave morphia and ipecac; patient became quiet. Continued iced mucilage.

Saturday, 6th, 4, P.M.—Patient quiet and easy; pulse 80, soft; tongue clean; an itching sensation in the wound; slight tumefaction, and some soreness, of the abdomen; no movement of the bowels since Friday at 4, A.M. Ordered enema.

Sunday, 7th, 11, A.M.—Patient comfortable; had two dejections. Raised the bandage, and made a small opening through the adhesive straps for the discharge of pus. Pulse 80; has great desire

for nourishment. Directed the bowels to be kept open by enema. 5, P.M.—Is troubled with severe melanotic regurgitation; complains of burning sensation in superior epigastric region; pulse 65, soft; ordered an enema, and solution of bitartrate of potash for drink. Morphia, gr.  $\frac{1}{4}$ , occasionally.

Monday, 8th, 10, A.M.—Patient quiet; pulse 75, full; face flushed; bowels moved once last night. Examined the wound, and found it had cicatrized nearly its entire length; washed and dressed it. Bled the patient ten ounces. Enema and morphia after the bowels move, during the night, should he be restless.

Tuesday, 9th, 6, P.M.—Patient bolstered up in bed, and comfortable. Pulse 76; bowels not moved since 8 last night. Ordered an enema. Examined the wound, and found it doing well. Bitart. potass. continued.

Wednesday, 10th.—Found the patient quiet; pulse 70; rested well through the night; has an intense craving for food; face slightly flushed. Advised some nourishment to be taken. He complained of cramp in the extremities on attempting to move.

Thursday, 11th.—Patient tolerably comfortable; some thirst; has eaten too much, and has exercised more than was prudent. Pulse 75 and hard; face flushed; dressed the wound, which is healing rapidly; bowels open. Ordered sulph. morph., gr.  $\frac{1}{4}$ , and ipecac, gr. i.; abstemious diet.

Friday, 12th.—Patient comfortable; says he feel well enough, except some pain in the lower bowels; pulse 78, soft; tongue natural; some tenderness on pressure over the hypogastric region.

Sunday, 14th.—Found the patient standing in the door; dressed the wound, which looks healthy; tongue slightly coated; bowels inactive; appetite good. Ordered mass. hyd., gr. x., followed by enema.

Wednesday, Jan. 17th.—Found the patient resting quietly after a walk of half a mile. Washed the wound, clipped and removed the sutures, and dressed with basilicon cerate, with injunction for bowels to be kept open, and care in diet. Patient dismissed.

REMARKS.—It will be observed in this remarkable case, that convalescence was established as rapidly as after most of the minor surgical operations. The patient was discharged on the fifteenth day after the operation, and has continued well up to this time. He is now residing in this city, working daily at his trade—that of a shoemaker. The orifice in the stomach was made on the left anterior side, and I think about parallel with the pylorus. The opening was just large enough to withdraw the lead. From some cause, probably from the efforts to vomit, a portion of the omentum had been forced out between the sutures, and when the adhesive strips were removed for the first time it was found protruding from one half to three quarters of an inch. Upon examination with a probe, I found it had formed adhesions on both sides

of the orifice. I therefore removed the external portion with a pair of scissors.

After carefully examining the brief suggestions given by authors on this kind of operation, it seemed to me that there were none that would suit this case. Nothing less than perfect control of the stomach could promise success, if success were attainable.

*First*, the operation must be conducted so as to preserve the stomach from those serious injuries arising from the advised manipulation previous to opening it.

*Second*, the incision must be made sufficiently high up in the stomach to prevent the escape of its contents (or should the opening be made into the stomach where the point of the bar rested, the incision *must be stitched*).

*Third*, to make an incision into the cavity of the abdomen, and attempt to manipulate the stomach and bar of lead with instruments, had in it, to my mind, no promise of success, when we recollect that the length of the bar was  $10\frac{3}{4}$  inches, and that the stomach must be opened so as to withdraw the bar of lead *by its lower end*. I therefore adopted what I conceived to be the correct theory, viz.: 1st, to open an orifice in the abdomen large enough to pass in my hand, and thereby have the stomach and its contents under perfectly easy and natural control; and, 2d, to make the abdominal incision in such shape as to command the point of the bar of lead *after it had been retracted*, without bruising, distorting, or even seriously misplacing the stomach.

It may be a matter of surprise that an operation was not done sooner. Our reply to the question is, that an operation of that magnitude was not justifiable as long as there was any doubt as to the lead being in the stomach; that the evening previous to the operation was the earliest time that all doubts of the fact had vanished; and the operation was proposed at the earliest practicable moment thereafter. Although I had seen the patient, in company with other physicians, almost daily after the singular feat had been performed, during all this time I had not seen one single symptom that was *conclusive evidence* of the presence of a bar of lead in the stomach.

The length of the bar is  $10\frac{3}{4}$  inches, and its weight  $9\frac{1}{2}$  ounces avoirdupois.

I would here remark that Mr. Bates has been residing in Kansas Territory during the past summer.

*January 2, 1860.*