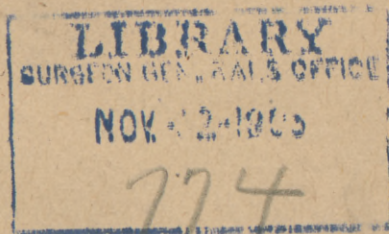


VAUGHAN (G.T.)

from shot wound of the
abdomen +





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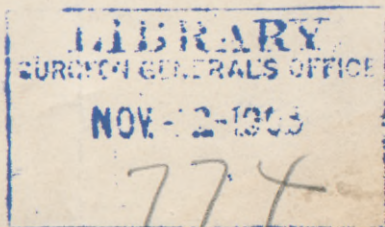
**GUNSHOT WOUND OF THE ABDOMEN: TEN
INTESTINAL PERFORATIONS AND TWELVE
PERFORATIONS OF THE MESENTERY;
OPERATION; RECOVERY.**

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G. A. F., white, male, aged thirty-one years, native of Virginia, was admitted to the Emergency Hospital during the night of May 26, 1898, having just been shot in the abdomen with a pistol. When seen by me, a little more than one hour after the shooting, his condition was very good. Pulse 84; temperature not taken; there was no nausea, vomiting, or evidence of shock; but the patient complained of severe paroxysms of pain in the abdomen. The wound was in the left side of the abdomen, about two centimeters ($\frac{3}{4}$ of an inch) above the center of a line drawn from the navel to the anterior superior spinous process of the ilium, but a little nearer the navel. Blood was oozing steadily from the wound. It was impossible to decide from the symptoms present whether or not the viscera had been injured. Injections per rectum of gas or water were not made use of on account of the danger of forcing intestinal contents into the peritoneal cavity in case the intestine had been wounded. It was thought safer and more satisfactory to explore the wound with probe and finger, enlarging it as might be necessary for this purpose.

The patient having been chloroformed and the surface carefully cleansed as if for abdominal section, attempts were made to introduce a probe into the peritoneal cav-



ity, but the effort failed, probably owing to the muscles having been contracted when perforated, their subsequent relaxation interposing sound tissue across the track of the ball. Accordingly the probe was introduced as deep as it would enter and the tissues were divided to this depth for a space of about six centimeters ($2\frac{1}{2}$ inches). The probe was then introduced at a different angle and the tissues again divided, when it was found that the probe entered the peritoneal cavity, its entrance being followed by a free discharge of blood. The incision in the skin and muscles was rapidly extended to about thirteen centimeters ($5\frac{1}{4}$ inches) and the peritoneum incised, blood flowing freely from the cavity.

The first coil of intestine which presented was drawn carefully through the wound and examined. Not more than ten centimeters had been thus drawn out before a perforation was found, there being two openings, one of entrance and the other of exit. These were closed and further search made, the coils of intestine being surrounded by flannel cloths wrung out of hot salt solution and replaced at one end while they were being drawn out at the other. Eight openings were found in what was thought to be the lower part of the jejunum and two in the ileum. There were six perforations of the mesentery, or twelve openings in all, the wounds of entrance and exit in the mesentery being closed separately. The ten perforations of the intestine and twelve of the mesentery made a total of twenty-two openings. Twenty of these openings were closed by sutures; two in the mesentery were not bleeding and were passed over. A round sewing needle with fine silk was used, the mattress suture introduced including simply the serous and subserous tissues exclusive of mucous membrane, thus approximating the serous surfaces. The line of sutures was transverse to the long axis of the intestine. The wounds in the mesentery were closed in the same way. In a few of the

large wounds of the intestine, where the ball had evidently cut through the convex border of the gut, making a single, very ragged, large opening, instead of two small openings, two sets of sutures were used, the first to approximate the edges, and the second, the mattress suture as already mentioned. In all other places a single row of sutures was used, the threads being placed about half a centimeter apart (five to an inch). The bleeding was chiefly from the mesentery and the vessels were controlled by the sutures. There was about half a pint of blood in the abdominal cavity. The ball, a .38-caliber, was found wrapped in a portion of the great omentum. It was not scarred or flattened, evidently not having struck a bone or other hard object.

Fortunately the portion of intestine wounded, included in a length of about two meters of the jejunum and ileum, was empty of fecal matter and none was detected in the peritoneal cavity; but the cavity was thoroughly irrigated with about 10,000 cubic centimeters of warm salt solution. The entire length of the small intestine was examined by sight and the large intestine, stomach, kidneys, liver, and spleen by palpation. The wound in the abdomen was closed by means of interrupted silkworm-gut sutures, including skin, muscle and peritoneum, without drainage. Pulse 124 at close of the operation, which lasted 2½ hours. The patient suffered considerable pain on recovering from the anesthetic (chloroform) and was given .015 gram (approximately ¼ of a grain) of morphin hypodermatically.

May 27th. Patient slept very little; is nauseated. Ordered sulphate of magnesia, four grams (60 grains) every hour until bowels should act. After taking two ounces the bowels moved four or five times and the nausea and other symptoms improved. Temperature, in axilla, 38° C. (100° F.), both morning and evening. Pulse 120 in morning, 104 in evening. May 28th. Temperature

37.2° C. in morning, 37.4° C. evening. Pulse 104 in morning and evening. May 29th. Temperature 37° C. (98° F.); pulse 80. After this the pulse and temperature were practically normal; once for some unknown reason the temperature rose to 38.8° C. The patient had no opiates after the 29th. June 10th. First dressing; stitches removed. There was primary union throughout except at the point of entrance of the bullet and a short distance below, both of which were covered by small scabs. A few drops of pus exuded where some of the sutures passed through the skin. June 12th. Patient allowed to get up, abdomen being well supported by a flannel bandage. June 19th. Patient walking about; still small scabs over the two points mentioned. June 24th. Patient well; appetite good, bowels act fairly well, occasionally requiring salts or an enema. Complains of a little stiffness about the wound. Discharged from treatment.

