VENOUS MESENTERIC THROMBOSIS

Report of a Case with Recovery

WILLIAM S. DEMPSEY, M.D., and THOMAS E. JONES, M.D.
Division of Surgery

RECOVERY from venous mesenteric thrombosis is rare. D'Abreu and Humble[1] state that the prognosis in thrombosis of the mesenteric arteries is more favorable than in cases involving the veins.

The case reported here demonstrates the following unusual features: (1) recovery from venous mesenteric thrombosis, (2) construction of an artificial external anastomosis of the small bowel, and (3) use of a spur clamp on the small intestine with subsequent closure as in a Mikulicz resection.

Case Report

An obese white man, aged 60, was admitted to the Cleveland Clinic Hospital on July 29, 1947, with sharp pain in the right upper quadrant of the abdomen. Four months prior to admission he had experienced intermittent, dull, aching pain in the lower quadrant of the abdomen, and one month before admission he had entered another hospital because of sudden, severe, sharp, intermittent, midabdominal pain. No definite diagnosis was established, and the patient gradually improved and was discharged two weeks later. Ten days prior to admission he had had severe diarrhea without blood or mucus which lasted three days. The bowel habit was normal at the time of admission.

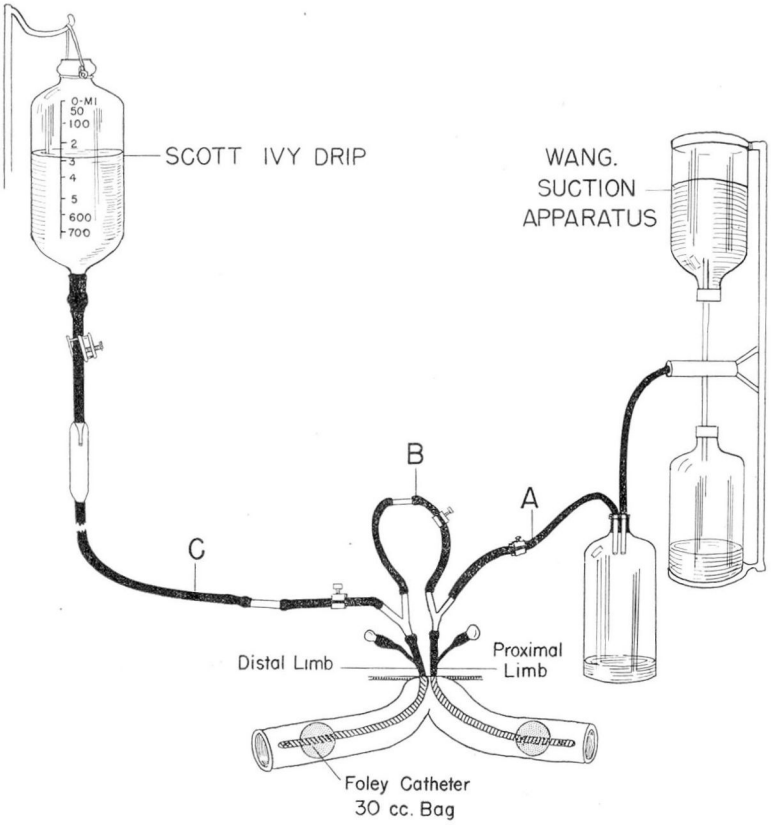
On physical examination the temperature was 101.3 F., pulse 110, respirations 28, and blood pressure 120 systolic, 80 diastolic. The upper portion of the abdomen was hyperresonant and the lower portion dull. A large mass was palpable in the right lower quadrant. Peristalsis was present, but sounds were infrequent. Laboratory studies did not reveal any abnormalities except a white blood count of 9300 with 87 per cent polymorphonuclears.

The patient was given supportive therapy, and a Harris tube was introduced but failed to pass through the pylorus. A definite diagnosis was not established, although a perforated appendix with abscess formation was suspected.

Operation was performed on July 31, 1947, under spinal anesthesia induced by 10 mg. pontocaine and 100 mg. procaine hydrochloride, supplemented by endotracheal ether. A McBurney incision was made, releasing a large quantity of thin bloody peritoneal fluid. Exploration disclosed a gangrenous segment of the distal ileum. The wound was closed, and a midline incision was made. Thirty-two inches of lower ileum containing the gangrenous segment was resected, and an isoperistaltic anastomosis was constructed. The left side of the abdomen was then explored, and a loop of the distal jejunum was found adherent to the parietal peritoneum. This was freed, exposing a three-inch loop of completely necrotic jejunum. Because of the condition of the patient and the uncertainty of the viability of the intestine in this area, the loop of necrotic jejunum was exteriorized and the necrotic bowel and mesentery trimmed away. Catheters were tied in the proximal and distal limbs of the exteriorized bowel. The wound was closed with figure of eight alloy steel sutures. During the operative procedure 1000 cc. of whole blood was administered intravenously.

The abnormalities revealed at operation and by examination of the pathologic specimen were (1) recent and extensive venous mesenteric thrombosis of two feet of the terminal ileum with hemorrhagic infarction, (2) old established venous mesenteric thrombosis with gangrene of three inches of the lower jejunum, and (3) hemorrhagic ascites (1000 cc.).

Postoperative Course. The patient was given heparin by continuous intravenous drip through a plastic tube. The coagulation time fluctuated widely in spite of repeated attempts at stabilization. Dicumarol was administered simultaneously. The prothrombin time was prolonged satisfactorily in forty-eight hours, and the heparin was then discontinued. The jejunostomy was functioning satisfactorily forty-eight hours after operation. However, it was difficult to maintain chemical balance because of electrolyte loss, and one week after operation an artificial external anastomosis was made (figure) to maintain electrolyte balance. The



Legend

Diagram of apparatus. A No. 24 Foley catheter (30-cc.-bag capacity) was inserted into each limb of the double-barrelled jejunostomy and a Y-glass tube placed in each catheter. Tube A was attached to a Wangensteen suction apparatus for use as needed. Tube B was attached through a glass adapter to the distal limb. Peristalsis forced the intestinal content through the anastomosis freely as long as the oral intake was restricted to clear liquids. Tube C was attached to a bottle (Murphy drip) for intermittent Scott-Ivy feedings. A series of stopcocks facilitated the use of the anastomosis.

The authors express their thanks to Miss Beatrice Boyle for her drawing of the apparatus.

patient developed a progressive icterus which reached a peak of 70 three weeks after operation. During the administration of dicumarol the prothrombin time varied considerably. In a little more than three weeks after operation anticoagulant therapy was discontinued.

The limbs of the jejunostomy were side by side, and approximately four weeks after operation a spur clamp was applied to the septum between the limbs. The clamp fell away five days later. The patient was having bowel movements per rectum, but leakage at the jejunostomy was so great that nutrition could not be maintained without supplemental intravenous therapy. (Throughout the patient's hospital stay penicillin, intravenous fluids, amino acids, transfusions, vitamins, and digitalis were given as indicated.) Approximately seven weeks after the initial operation the jejunostomy was closed under spinal anesthesia. The bowel was closed with inverting continuous chromic sutures and the abdomen with through and through steel sutures. After closure there was slight leakage of intestinal content at the suture line, and sump drainage was instituted. Drainage ceased on October 10, 1947, and the patient was discharged on the following day.

He returned on February 4, 1948, at which time he was in good general health but had a small incisional hernia. The patient was given permission to return to his occupation as a watchman.

Reference

1. D'Abreu, F., and Humble, J. G.: Mesenteric venous thrombosis; recovery after resection with heparin. Lancet 1:534-536 (April 13) 1946.