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John Benjamin Murphy (1857-1916): An American Surgical Phenomenon

Leon Morgenstern, MD

In 1912, the surgeon J.B. Murphy (Figure 1), sometimes called the “Stormy Petrel” of American surgery, inserted an “electric” cystoscope into a cholecystostomy drainage tract. Here in his own words¹ is what he saw and what he did:

It showed that a small stone was present in the hour-glass contraction zone, where the large stone had formerly been lodged. The cystoscope was pressed on this to the round ligament; a hook passed through the cystoscope to the stone. The stone was rotated and jammed against the edge of the cystoscope, and by this means it was extracted from its position.

The drainage was removed at the end of five weeks. The gallbladder mucosa had resumed a smooth, glistening appearance, in contrast to the trachomatous appearance which had been present at the time of operation. The smooth condition of the gallbladder is our guide in removing the drainage tube.

This was arguably the first biliary tract endoscopy, fittingly done by one of the great surgical innovators of his day, almost a century ago.

John Murphy (he added the Benjamin later) was born in 1857 in a log cabin in Appleton, Wisconsin. His professional life, however, was as a pure Chicagoan, the city in which he worked his way through Rush Medical College, interned at Cook County Hospital, held professorships at three medical schools, and was chief of surgery at Chicago’s Mercy Hospital from 1895 until his death in 1916. American surgery had not seen, nor will it probably ever see again, a general surgeon of such

diverse talents and prodigious productivity. His impact on surgery in America has been well told in several tomes by adulatory biographers.²⁻⁴ Still, it deserves some recounting in this journal of innovative surgery. He is eponymously remembered⁵ for an “anastomotic button,” a “punch,” a “sign” and a “drip.” Trainees and young surgeons may not be familiar with any of these, but they were shop talk in the days of my residency in the 1940s.

Murphy’s anastomotic button, as he called it, was originally designed for a sutureless anastomosis of the gallbladder to the duodenum, which was his preferred treatment for acute cholecystitis, but it was equally suitable for intestinal anastomoses. He developed it in the experimental animal laboratory that he maintained in a barn behind his house. The two halves of the brass button, each about an inch in diameter, were inserted into the bowel to be anastomosed and held in place by



Figure 1. John Benjamin Murphy, MD (1857-1916).

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purse-string sutures. When snapped together, *voilà!* The anastomosis was accomplished.

In his paper on the invention, published in 1892,⁶ Murphy said “It takes about as long to describe the operation as to perform it. The time occupied with the first lady on whom I operated was *eleven minutes*, from the entering of the peritoneal cavity until the closing of the same.” Further along in the same article is this startling admission: “I decided to perform cholecystoenterostomy by my anastomosis button which I had used for the *first time* on a dog six days previous.” This bold approach of John B. Murphy was not atypical of this colorful, controversial, and creative surgeon.

In a sense, the Murphy button was a forerunner of the modern end-to-end stapling instrument. After Murphy’s description of the device with three favorable case reports in 1892, the button became a commonly used method for intestinal anastomoses. It was the method of choice for such operations at the Mayo Clinic and elsewhere in the United States until the mid-1930s. Thereafter, it was used only sporadically, although the concept lingered on for at least another decade.

Two of my mentors in surgery, H.H. LeVeen and Lawrence Miscall, adapted it for other purposes. LeVeen⁷ reported on a Murphy Button for vascular anastomosis in 1949; Miscall⁸ reported use of a Murphy Button in esophagogastronomy in 1945. Neither of these methods achieved enough success to warrant acceptance. Nowadays, the sole use of the button is on a surgical museum shelf (Figure 2). Only the memory of the ingenuity of the idea persists.

Other eponymous Murphyisms were less dramatic. The “Murphy punch” was a fist-percussive blow over the kidney, denoting renal obstruction,



Figure 2. Murphy Button, circa 2005, on a museum shelf. Photo credit: Dr. Leo Gordon.

renal infarction, or renal inflammation when positive; the “Murphy sign” was a hammer-stroke percussion over the right upper quadrant, denoting gallbladder inflammation when positive; the “Murphy drip” was a proctoclysis of sodium and calcium chloride solution for hydration and electrolyte administration when oral intake was impossible. All three “Murphys” were in common usage during my residency days.

No one more vividly personified the role of the general surgeon than Murphy. He was a man for all seasons in almost every specialty of surgery. In addition to the more familiar operations in general surgery, such as appendicitis, appendiceal abscess, cholecystostomy, intestinal obstruction, mastectomy, and others, he described and performed innovative procedures in neurosurgery, orthopedics, gynecology, urology, plastic surgery, thoracic surgery, and vascular surgery. In the latter specialty, he is given credit for the first successful arterial anastomosis, in a case of a bullet wound of the femoral artery. Among his exploits afield from general surgery were his own techniques of neuroorrhaphy, arthroplasty, prostatectomy, nephrectomy, hysterectomy, bone grafting, thoracoplasty, and other procedures too numerous to mention.

His relationships with colleagues and peers ranged from bitter acrimony to prestigious accolades. Early in his career, his flamboyant display of surgical genius evoked such calumny that he was refused membership in the Chicago Medical Society and the American Surgical Association. Later in his career he became President of the Chicago Medical Society, President of the American Medical Association, and a belated member of the American Surgical Association. He participated in the founding of the American College of Surgeons. His fabled “Surgical Clinics of John B. Murphy,” transcribed by a secretary as he lectured while operating, eventually became the “Surgical Clinics of North America.” With Franklin Martin, he helped launch *Surgery Gynecology and Obstetrics*, the widely read “Blue Journal.” It later became the *Journal of the American College of Surgeons*.

Scarcely any of his innovative surgical techniques have stood the test of time, but that does not tarnish his starring role on the American surgical scene of his day. His intellect brimmed with new ideas. Few of them would have withstood the glaring scrutiny of the present overseers of new technology had they been reviewed by an institutional review board or undergone a clinical trial. In contrast to his contemporary, William Stewart Halsted, of the new Johns Hopkins Medical School in the

East, Murphy left no lasting legacy of student disciples to carry his teachings forward.

In the summer of 1916, plagued by the Chicago heat, recurrent attacks of angina pectoris, and increasing debility, he sought relief by a trip to Mackinac Island in Michigan. Just 3 days after his arrival, he died at the young age of 59. Not surprisingly, he succumbed to coronary artery disease, a harbinger of which had been his recurrent attacks of angina pectoris for several years. Although he himself mistakenly attributed his angina to aortitis secondary to infection, it was undoubtedly a consequence of his frenetic professional activities.

John B. Murphy was one of the last great American frontiersmen of clinical surgery. He was a master surgeon, a superb clinician, a great teacher, a brilliant innovator, and a prolific author. He had faults that engendered envy and often enmity among his colleagues, but his brilliance outshone his shortcomings. The times today preclude the emergence of another John B. Murphy.⁹ If he was a "Stormy Petrel," he was also an *avis rara*. A very rare bird indeed.

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