Historical Vignette

The Vanderbilt University neurosurgical heritage

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The Vanderbilt University Hospital heritage was influenced by the excellence of the Johns Hopkins era — by Osler, Halsted, Cushing, Brooks, and many others. Upon this strong origin, the neurosurgery department was built by Cobb Pilcher and perpetuated by William F. Meacham.

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Sir William Osler’s influence on medical education and ethics affected many of the medical universities of his era. In 1925, the founding staff of the Vanderbilt University Hospital and Medical School in Nashville, Tennessee (Fig. 1) was an honor roll of second generation Oslerians: Robinson, Goodpasture, Casparis, Cunningham, Morgan, Burwell, Brooks . . . . Obviously, Vanderbilt had drawn heavily from the Johns Hopkins wellspring of academic excellence. This heritage continued and eminently shaped the Vanderbilt surgical and neurosurgical departments. The following biographical history notes are pertinent to this lineage.

Harvey Cushing arrived at the Johns Hopkins Medical School as an assistant resident on the Halsted surgical service in 1896. During the ensuing years, he lived next door to William Osler and enjoyed “latchkey” privileges in the Osler home. This personal and professional relationship continued throughout their lives.

The policy at Johns Hopkins was to select the house staff from the top echelon of each graduating medical class and, in 1910, Walter Dandy was chosen as the intern on the Halsted service. His personality and surgical approach alienated Cushing, an animosity that persisted throughout their careers. By 1913, Cushing had moved to Boston as Chief of Surgery at the new Peter Bent Brigham Hospital and Professor of Surgery at Harvard, his alma mater. Halsted, who had an aversion to departmental administration, had assumed that Dandy would accompany Cushing to Boston. When this did not occur, there was a confusion in staff appointments at Johns Hopkins which would later affect the Vanderbilt heritage.

Barney Brooks of Jacksboro, Texas, after alternating work years and academic years, finished fifth in the Johns Hopkins Class of 1912. He was retained as the intern on the Halsted service and had an outstanding year, excelling in Cushing’s Experimental Surgery course. He fully expected to continue on the Halsted service as assistant resident but, with Dandy remaining at Johns Hopkins, Brooks instead took a position at Barnes Hospital and Washington University in St. Louis. There, he continued his surgical training and developed an experimental surgery laboratory and clinical service fashioned after the Hunterian laboratory and Halsted service. His studies on the etiology of the toxicity associated with intestinal obstruction and the venous obstruction basis of Volkmann’s contracture attracted wide attention.

Brooks’ notable work continued and many institutions sought his services. Meanwhile at Johns Hopkins, Dandy also established himself as a potential professor and both of these men were considered for the first Vanderbilt Surgical Chairmanship. In 1925, Brooks became Professor of Surgery at Vanderbilt and built the department along the lines he had experienced at Johns Hopkins: a strong clinical base and an active surgical research laboratory. He was a stern teacher, holding no regard for popularity, sparing in praise, and demanding of performance from himself, his colleagues, and his students. He pioneered peripheral arteriography and the treatment of carotid cavernous sinus fistulae by muscle embolization. His experimental surgery laboratory and teaching service flourished and his reputation was widely recognized, not only for his work in surgery but as a staunch champion for higher standards in medical education. He was the Chairman of the Vanderbilt Surgical Department until his death in 1952.

Following World War I, Cushing personally directed
the selection of the house staff at Harvard Medical School and the Peter Bent Brigham Hospital. In January, 1926, among the more than 30 hopefuls was a young man from Vanderbilt, Cobb Pilcher, highly recommended by Brooks. Cushing and his senior associates selected for the 1927 house staff: Cobb Pilcher, William German, Frank Ingraham, and four other gentlemen who would progress into specialties other than neurosurgery. It was during this phase of his career that Cushing was most productive in his voluminous brain tumor experience (he operated on his 2000th tumor in April, 1931).

Pilcher, while training at the Peter Bent Brigham Hospital, developed a close and lasting friendship with Cushing. Their correspondence through the years is a study in respect, mutual admiration, and support. Following his year in Boston, Pilcher returned to Vanderbilt to complete 4 years of surgical training under Brooks. He then studied neuropathology and neurosurgery under Percival Bailey in Chicago, and Ernest Sachs in St. Louis.

Returning to the Vanderbilt staff in 1933, Pilcher began to develop a clinical practice in neurological surgery while continuing a formidable schedule of research activities. In 1939, the Division of Neurological Surgery was formally established and soon thereafter was approved as a neurosurgical training program. The research interests of Pilcher included congestive heart failure, cerebral blood flow, penetrating wounds of the brain, intracranial tumors, cerebral edema, trauma to the nervous system, infections of the brain, operative hemostasis, and the epileptogenic effects of antibiotics. True to his heritage, Pilcher gave special significance to the laboratories for experimental surgery and neuropathology. His many publications were not only of excellent scientific quality, but demonstrated superior writing style. His letters to referring physicians are masterpieces of communication wherein he would review the clinical problem and describe the diagnostic progression and treatment design while conveying his compassion for the patient and respect for the referring doctor.

Cobb Pilcher was a person of charm, humor, and bright nature, but he was an uncompromising taskmaster, intolerant of mediocre performance, maintaining a personal goal of excellence and expecting others to adhere to the same. His surgical technique, a testimony to his excellent training, was anatomical, precise, and performed with the ultimate respect for tissue. Pilcher ascended to the presidency of the Society of University Surgeons (1946) and the Harvey Cushing Society (1947). His presidential address before the Harvey Cushing Society was a critique of the specialty and the neurosurgical training system. He addressed three problems: 1) What should constitute adequate training? 2) How should a Board of Certification function? and 3) What should be the scope of neurosurgical practice? He urged the specialty not to lose control of their primary areas of competence: the diagnosis and surgical treatment of nervous system disorders. Pilcher emphasized that training programs should be located at large teaching institutions for the abundance of clinical material and close association with the other neurological sciences. He stressed the need for a broad foundation in general surgery. He established the standard that neurosurgeons should be examined by neurosurgeons, not condoning the practice of importing nonsurgical specialists as board examiners. He concluded his address by admonishing the Society to climb progressively, proudly, and with dignity along the path of rightful destiny; the road to finer surgical accomplishment. Pilcher's career was illustrious and productive but tragically short; he died on September 22, 1949, at 45 years of age.

William F. Meacham was professionally born and raised in this staunch Vanderbilt setting under the demanding taskmasters Barney Brooks and Cobb Pilcher. After further training in Wilder Penfield's Montreal laboratory, Meacham returned to the Vanderbilt staff in 1947. Cully Cobb and Joe Melville Capps
became his associates, with an attending staff that included Arnold Metrowsky and David Scheibert. Neuroanatomy and clinical and experimental electroencephalography were contributions of Sam Clark (who coauthored Ramson and Clark's neuroanatomy textbook) and were continued by James Ward as an integral part of the neurosurgical academic program.

Meacham's teaching career has exceeded 45 years. Firmly based in neuropathology and continuing his predecessor's demands for excellence, he has perpetuated the Vanderbilt heritage. The logistics of the diagnostic process, the ability to organize and present a case, and the necessity to communicate with patients and to deliver compassionate care are the cornerstones of his teaching credo. The development of responsibility and surgical finesse was the expected progression. His large clinical practice covered all aspects of neurosurgery, providing a voluminous exposure for his residents to the surgical treatment of Parkinson's disease, tic douloureux, aneurysms, neoplasms, infections, spinal disc problems, and the full gamut of birth defects and pediatric neurosurgery. Currently, such an array of neurosurgical challenges can hardly be corralled by a single professor.

While accomplishing his clinical pre-eminence, Meacham ascended to national leadership and dedicated himself unselfishly to his profession, holding no less than 38 offices in various neurosurgical societies and serving most of these societies as president. He continues to serve the American Association of Neurological Surgeons (the Harvey Cushing Society) as historian. His honors include the Neurosurgeon Award given by the American Academy of Neurological Surgeons (1973) and the Harvey Cushing Medal by the American Association of Neurological Surgeons (1987). In 1974, his former residents founded the Meacham Neurosurgical Society to honor their professor and perpetuate his ideals. The William F. Meacham Chair in Neurological Surgery has been established at Vanderbilt University, funded by his residents, peers, patients, and friends.

In 1984, George Allen was appointed professor and chairman at Vanderbilt University Medical School. With the solid credentials of training and research positions at Duke University, the National Institutes of Health, and the University of Minnesota, and faculty and research progression from assistant professor (1975) to professor (1983) at the Johns Hopkins University and Hospital, he faces the challenge of continuing the strong heritage of the Vanderbilt University Department of Neurosurgery.

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