Biographical Sketch

George L. Walton, MD and Walter E. Paul, MD

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Abstract This biographical sketch on George L. Walton and Walter E. Paul corresponds to the historic text, *The Classic: Contribution to the Study of Spinal Surgery: One Successful and One Unsuccessful Operation for Removal of Tumor* (1905), available at DOI [10.1007/s11999-010-1664-2](https://doi.org/10.1007/s11999-010-1664-2).

This month's symposium is devoted to current approaches to a variety of cervical spine disorders. In 1905, Drs. Walton and Paul, both neurologists at the Massachusetts General Hospital in Boston described surgical approaches to two sorts of cervical spine problems [6]. Despite considerable searching, I was unable to learn much about the lives of these two individuals. At the time of this article we reproduce here, Dr. George L. Walton occupied the post of Clinical Instructor in the Department of Neurology at Harvard University and Physician to the Neurology Department at the MGH; Dr. Walter E. Paul, MD was an Assistant Physician in the Neurology Department at the MGH.

Walton and Paul reported two patients. The first patient had a myeloma involving the lamina associated with severe neck and arm pain, weakness, wasting, and numbness. The surgeon, Dr. J.C. Munro at Carney Hospital, performed a laminectomy of the sixth and seventh vertebrae and found them partly "eaten away by a soft gelatinous mass."

(The earliest use of the term "laminectomy" I could find was an article from 1891 written by F.C. Schaefer [6]. In that same year, however, Lloyd remarked [4], "There can be no doubt that the credit of having first operated upon the spine (1814) belongs to Mr. Henry Cline, although the operation had been suggested by Heister and others." "I should prefer to speak simply of operations upon the spine, resection of the laminae or perhaps lamnectomy..., instead of laminectomy, which has been employed lately. This term has the advantage of being derived from two Greek words, instead of a Latin word and a Greek ending.") The patient made a good recovery, with nearly complete relief of the arm pain, and had steady improvement in the neurological symptoms and signs. However, despite the relief, the authors noted, "signs have appeared of recurrence of the growth in other localities. This was, unfortunately, to be expected from its nature" [6].

The second patient presented with right arm pain "accompanied by a modified Brown-Séquard paralysis of gradual onset and rapid progression...(and)...led to the diagnosis of tumor pressing on the cord unilaterally in the lower cervical region. Removal of the vertebral arches failed to disclose the tumor, which on autopsy was found to project posteriorly from the anterior wall of the spinal canal at the level of the operation." The patient's condition was, unfortunately, "poor during the operation" and he died the next morning. An autopsy was obtained with the following findings: "At a point situated just posterior to the intra-vertebral (sic) cartilage between the bodies of the sixth and seventh cervical vertebrae, a small, rounded, firm, slightly elastic mass bulges backward..." They further noted "another minute slightly bulging mass similar in character...situation to the right of the median line and just posterior to the intravertebral cartilage between the fifth and sixth cervical vertebra." "Microscopical examination

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shows the tissue of the intravertebral disc extending into and lost in the tissues of the tumor mass. The tissue at its base is fibro-cartilaginous in nature..." These findings and the accompanying drawing suggest an extruded disc fragment arising from the sixth and seventh intervertebral disc. The authors do not appear to have fully recognized this as a ruptured disc because they refer to it as a "tumor" [6].

Barr, one of the first to clearly describe sciatica caused by a ruptured lumbar disc [1], credited Kocher with describing a ruptured disc in 1896 [3], then later Middleton and Teacher in 1911 [5]. It was not uncommon for surgeons to think of these as an "extradural ventral chondroma" of the spine [2]. Walton and Paul contributed by noting these same findings in the cervical spine [6], and if they were not the first to describe these findings in the cervical spine, they were among the first.

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