Warren B. Davis and the Birth of Plastic Surgery in Philadelphia: A Historical Vignette

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INTRODUCTION

The field of plastic surgery as we know it today has changed significantly since its formal commencement with the 1931 founding of the American Society of Plastic and Reconstructive Surgery (ASPRS), now the American Society of Plastic Surgeons (ASPS). Many authors have documented the history of plastic surgery, but none have yet told the story of how a unique group of Philadelphia surgeons and their practice became instrumental in many post–World War I innovations. At the center of this group was Dr. Warren Beagle Davis, the founder of the Warren B. Davis, MD practice (now Jefferson Plastic Surgery), one of the 10 founders of the ASPRS, and the first editor of the Plastic and Reconstructive Surgery (PRS) journal (Fig. 1). Dr. Davis and his associates would be responsible for major innovations in the field of plastic surgery, from developing the surgical repair of cleft lip and palate to the creation of a new generation of dermatome by his apprentice John Reese (Fig. 2).
Dr. Warren B. Davis

Warren B. Davis was born on September 6, 1881, in Keane, Ky. and attended Jefferson Medical College from 1906 to 1910. Upon graduation, he completed a research fellowship at the University of Berlin under Dr. Ludwig Pick before returning to Philadelphia to start his own practice in 1913 and teaching at Jefferson Medical College. During his research fellowship, he published a monograph entitled “Development and Anatomy of the Nasal Accessory Sinuses in Man.” Dr. Davis was described by some as the “epitome of the Philadelphia gentleman”; a nurse who worked with Dr. Davis for 25 years said, upon his passing, “I found him to be a kind, conscientious, exacting, hard-working man, good and kind to everyone.”

Dr. Davis was one of the 10 founding members of the ASPRS in 1931; he remained a fellow of this society throughout his career. Dr. Davis additionally served as the first editor of the *PRS* journal upon its inception in 1946. In the first issue of the *PRS* journal, a journal sponsored by the ASPRS, Dr. Davis wrote an editorial introducing this journal as the first publication exclusively devoted to the field of plastic and reconstructive surgery. To this day, the *PRS* journal remains one of the premier publications in the field.

In addition to his role in the ASPRS and *PRS* journal, Dr. Davis would become renowned in the world of plastic and reconstructive surgery for creating an innovative method for osteoplastic flap repair of the cleft palate. In 1928, he published a case series titled “Harelip and Cleft-palate: A Study of Four Hundred and Twenty-five Consecutive Cases,” documenting his technique as functionally and cosmetically superior to a mucoperiosteal flap alone. Before Davis’ innovation, osteoplastic flaps had a high rate of complications. Dr. Davis’ new technique involved a two-stage procedure; the first stage involved creating a mucoperiosteal flap, whereas the second stage involved creating an osteoplastic flap (Figs. 3 and 4). This technique allowed time to establish collateral circulation to the flaps between the procedures, resulting in an increased percentage of successful primary closures. Dr. Davis published several further articles detailing this technique, among the 26 peer-reviewed papers he published in his career. The Warren Davis technique, as it became known, was one of the most widely used techniques for cleft palatal closure after World War II.

Dr. John D. Reese

Another significant development in plastic surgery that can be traced back to this Philadelphia practice is the invention of the Reese dermatome. Dr. John Davies Reese was born on August 20, 1893, in Scranton, Pa. (Fig. 2). He was a tenacious and intelligent doctor who overcame difficult circumstances—from childhood polio, which left him with a footdrop, to financial difficulties paying for his education—to graduate from Jefferson Medical College. Following his graduation, Dr. Reese completed his internship at St. Agnes Hospital before training at Dr. Davis’ office. Those who knew Dr. Reese well knew that nothing excited his interest so much as being told that an engineer—excited his interest so much as being told that an engineer—application of a device that can be traced back to this Philadelphia practice is the invention of the Reese dermatome.

In 1945, the device was revolutionary in its precision and ability to create grafts of a uniform thickness. When the new and innovative Padgett-Hood dermatome was invented in 1937, Dr. Reese was convinced the device needed improvement to obtain a predictable thickness—something that made the device difficult to use. When Dr. Reese created a prototype of his dermatome in 1945, the device was revolutionary in its precision and ability to create grafts of a uniform thickness. The Reese dermatome played a significant role in burn medicine during World War II when, thanks to medical innovations, soldiers with burns were living long enough to increasingly benefit from these grafts. Following Dr. Reese’s death, Dr. James Fox donated the original dermatome to his and Dr. Reese’s alma mater, Jefferson Medical College.

Takeaways

**Question:** How did Warren B. Davis and the practice he founded contribute to the development of the field of plastic surgery?

**Findings:** Dr. Warren B. Davis was one of the pioneers of early cleft palate surgery. His trainee, Dr. John Reese, was the inventor of the Reese dermatome that changed the face of burn medicine during World War II.

**Meaning:** Dr. Davis, Dr. Reese, and their plastic surgery practice made significant contributions to the field of plastic surgery at its inception—a legacy this century-old practice continues to this day.

The Founding of a Historic Plastic Surgery Practice

Along with his intellectual contributions to the field, Dr. Warren B. Davis also made the contribution of establishing a plastic surgery practice that would continue to run for over a century. His small Philadelphia practice, established in 1913, continues to this day. Today, this practice conducts all aspects of reconstructive and cosmetic surgery and trains general surgery residents as well as plastic surgery residents from local plastic surgery residencies. The longevity of this practice is secondary to its efforts to remain at the horizon of plastic surgery and to its incorporation of energetic and talented...
medical students and residents, who are treated as equals on the team and often become attending members of the group. In fact, this practice has had only four chairmen since its inception (Dr. Warren Davis, 1913–1947; Dr. J. Wallace Davis, 1947–1976; Dr. James Fox, 1976–2014; Dr. Steven Copit, 2014–present) and 11 staff plastic surgeons, all graduates of Dr. Davis’ beloved alma mater, Jefferson Medical College. Although cleft palate surgery and skin grafts have developed and changed significantly since the founding of the field of plastic surgery, the contributions of Dr. Davis and Dr. Reese helped shape the field at its inception and improved countless lives—a legacy Dr. Davis’ practice continues to this day.

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REFERENCES
3. Fox JW, Fox IM, James W. Fox, IV, MD, in discussion with Sarah Wagoner, 2021. [Interview]