

SECTION EDITOR: ROBERT L. SIMONS, MD

Johann Friedrich Dieffenbach

The Many-Sided Odysseus

THE 200TH birthday of Johann Friedrich Dieffenbach (1794-1847), the remarkable and innovative Prussian surgeon, was celebrated in his adopted city of Berlin a decade ago. His contributions to the field of plastic surgery, particularly of the face, are myriad and have influenced generations of us who followed in his wake. The commemoration ceremonies were held on February 1 and 2, 1992, at the erstwhile renowned Charité Hospital where Dieffenbach served for 11 years and which flourished as the seat of German medical prowess.¹ The past half century has not been kind to the tradition of German medicine, as the famed institution that once carried the torch of Teutonic enlightenment fell into disrepair at the hands of neglectful directorships. Nevertheless, Dieffenbach's legacy merits no burnishing.

The pioneering spirit of Johann Dieffenbach was nurtured in a family dedicated to scholarly pursuits, especially history, philosophy, language, and law. Young Dieffenbach proved his academic aptitude by the early completion of his baccalaureate degree, followed by his embracing philosophy and the humanities at the University of Rostock. A galvanizing force other than his family, however, shaped the young man. It was the horrific casualty he witnessed as a cavalry soldier in the campaigns waged against France. He conveyed relief that he surfaced unscathed from battle but expressed empathy with his wounded brethren.² His scholastic mind and unbridled compassion were attributes that would ordain his career in medicine.

His formal medical training began at the University of Königsberg where he studied under the tutelage of Karl von Baer, the brilliant force behind modern embryology. His inclination toward plastic surgery was apparent in his initial forays into experimental work: he investigated the transplantable and regenerative capacity of hair and feathers. The tedious and technical nature of this study suited his methodical disposition and mechanical dexterity. He later fashioned these early experiments into a cohesive doctoral thesis, which he entitled *Nonnulla de Regeneratione et Transplantatione*. The manual agility that had once led him to wood carving eventually took him to his true passion, surgery.

In 1820, Dieffenbach aborted his studies at Königsberg in favor of a full-time commitment to surgical scholarship at the University of Bonn. At this prestigious institution, he was enthralled by the sirenlike spell of his lecturers, among whom were the distinguished surgeon Philipp von Walther and the influential anatomist Christian Nasse. After his studies in Bonn, he took the requi-

site medical examinations and ventured to Berlin to open his practice. His initial professional endeavors embraced both medical and surgical disciplines, but he would soon limit his practice to the latter, and then more narrowly define his compass to reconstructive surgery alone.

Having achieved great renown with his reconstructive efforts for facial defects engendered by trauma or tumor, Dieffenbach fell under the watchful attention of Karl Friedrich von Graefe, the Professor of Surgery at the University of Berlin. This mentor, who also pioneered many facial plastic surgery techniques, inspired his pupil to even greater heights. In 1826, Dieffenbach published a method of cleft palate repair that owed much to his predecessors but also proved to be a distinct contribution to the field. In 1827 and 1834, he devised and published new techniques for lip reconstruction that involved local square flaps to reconstruct triangular defects. He also actively advocated the V-Y advancement flap for facial reconstructions. His prodigious talent procured him the coveted post at the Charité Hospital in Berlin, where he succeeded his mentor von Graefe as Professor in 1840.

Although Dieffenbach was primarily intrigued with facial reconstruction, his general surgical background led him to investigate other corporeal challenges as well. From 1829 to 1834, he published numerous monographs under the title *Surgical Experiences, Especially on the Restoration of Destroyed Parts of the Human Body Using a New Method*. In this collective treatise, he wrote extensively about innovative techniques addressing reconstruction of the ears, nose, lips, palate, urethra, and eyelids damaged by burns, cancer, or congenital anomalies. Along with his contemporaries Ernst Blasius and Natale Petrali, he also championed the use of the forehead flap for total nasal reconstruction (**Figure**). Although the flap had been used for centuries in the Indian subcontinent to reline partial nasal defects, Dieffenbach used this flap to repair more severe defects involving the internal and external linings of the nose.³ As his stature grew deified, he was asked to tackle problems that were deemed incurable by his colleagues. He addressed disparate bodily disfigurements that included imperforate anus, hypospadias, urethral fistula, and vesicovaginal fistula. Dieffenbach also came to learn of the extraordinary results of Georg Stromeyer in myotomy and tenotomy to correct clubfoot disorders. He did apply Stromeyer's techniques to numerous conditions; for instance, he severed the nonparalytic side of the face to achieve balance; he corrected strabismus and torticollis; and even, perhaps overzealously, he tried to ameliorate stuttering by incising the root of the tongue.⁴ His 2-volume masterpiece,

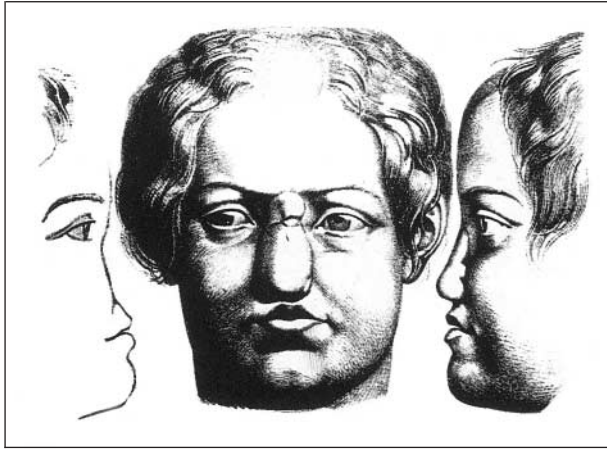


Illustration of Dieffenbach's forehead flap for total nasal reconstruction from *XXI Lithographierte Tafeln zu Dr Dieffenbach's chirurgische Erfahrungen* (Theodore Christian Friedrich Enslin, Berlin, Germany, 1830).

Operative Surgery, covered the full gamut of surgical problems including amputations, paracentesis, laparotomy, hysterectomy, and dental extraction.

His fame reached Olympic proportions and he traveled in distinguished circles, even in the entourage of Friedrich Wilhelm IV, King of Prussia. He was invited to lecture and operate abroad, and many foreign guests would flock to his Berlin clinic. Roundly loved by the public, he was the celebrated subject of a popular children's song. Even a plant was named in his honor, the *Dieffenbachia*. Despite all the acclaim, he was always reserved and exercised genuine humility at the public approbation he was accorded. A fervent equestrian, he would retreat from the spotlight to the country and

indulge in his favorite pastime. He was twice married and a beloved father to his son and daughter. He left his family and his much-adoring public unexpectedly when he died in the midst of explaining an aneurysm case to 2 visiting French physicians.

Dieffenbach embodied the ideals of the Renaissance in his varied successful endeavors, from meticulous surgeon, creative mind, and scholarly academician to virile sportsman. He proposed that the surgeon be a "many-sided Odysseus, full of native inventions and resources not to be found in books"⁵—a dictum that his life exemplified. His legacy to the discipline of plastic surgery is both broad and enduring.

Samuel M. Lam, MD
Lam Facial Plastic Surgery Center
1112 N Floyd Rd, Suite 9
Richardson, TX 75080
(e-mail: samlammd@yahoo.com)

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