

# The First Time in Dentistry

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## Editorial

The oldest dental treatment dates back to 14000 years. It was a dental cavity carved in a molar discovered in Italy. The first dental implant was discovered by Laplace in 1954. It was a 7000-year-old prehistorical osteointegrated dental prosthesis: a right maxillary second premolar was replaced by a bony element of unknown origin [1].

The first dentist known by his name was Hesirein Ancient Egypt (around 2700 BC), bearing the honorary title of wr-ibḥ-swnw (“Great one of the dentists and physicians”) [2].

In 1530 came out “Zene Artzney Buchlein wider allerleikranckeyten und gebrechen der tzeen” (Booklet of Remedies Against All Sorts of Diseases and Infirmities of the Teeth), the first book entirely dedicated to dental treatments, written for barbers and trauma physicians specialised in mouth treatment. The first dental book in France was written by Urbain Hémarde and published in Lyon, in 1582, by Benoist Rigaud. It was entitled “Recherche de la vrayeanatomie des dents, nature et propriétés icelles” (Research on the true anatomy of teeth, their nature and properties). Hémarde was the dentist of Cardinal d’Armagnac, ambassador of Francis I, and he wrote this book on his recommendation [3].

The anatomist Andreas Vesalius (1514-1564), in his book “De

humani corporis fabrica libri septem” (1543), described for the first time the tendons and articular cartilages of the jaw joint. He depicted with a huge accuracy the function of the muscles of the face and the cheeks, gave an exact anatomy of the tooth root and was the first to identify the pulp, without, however, finding out its function. Bartolomeo Eustachi (1500/1514-1574) was the first to study closely the first and second dentition and to describe the function of the dental pulp cavity [4].

In 1633, Dupont published “On the dental transplant” and advised the extraction and the immediate reimplantation of the teeth for odontalgic therapeutics. He was the first to perform the “avulsion and reimplantation” surgery in the treatment of a pathological tooth [5].

In 1756 and 1769, Pfaff, dentist of Frederic the Great (Frederic II of Prussia), described dental casting by the use of sealing wax, where, for the first time, the plaster cast of the impression was used as a model to craft a dental prosthesis [6].

The dental pulp capping, covering of the vital dental pulp (dental nerve) with little gold plaques goes back to Pfaff. He published the first description of an extra-oral root retrofilling during a tooth reimplantation. The extremity of the extracted tooth root's is sealed and then the tooth was replanted [7].



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In 1771, John Hunter, in “The Natural History of the Human Teeth (1771)”, transplanted the healthy tooth of a living person into a rooster comb. A few months later, the rooster was killed and John Hunter noticed that the tooth was fixed to the tissue and connected to blood circulation. It was the first case of osteointegration. In 1807, when his book, “Manual of dentist’s art”, was released, Maggiolo described the implantation of a tooth with the 18-Carat gold alloy. This was the first placed implant. 1952: the Swedish Professor Per-Ingvar Brånemark carried out an experimental study, using a titan implant in order to better understand the blood circulation in the bone area. He had an optic chamber specially made, enabling to film *in vivo* the bone repair and revascularization phenomenon. This chamber, made of titan, was introduced in a rabbit tibia. When professor Brånemark wanted to take this optic chamber back, he realized it was soldered to the bone of the rabbit. The concept of osteo-integration was born [8].

On 11/12/1844 Horace Wells, dentist in Hartford, USA, asked his associate John Riggs to remove one of his wisdom teeth, first asking the chemist Gardner Quincey Colton to apply nitrogen in his mouth. On 30/09/1884, Thomas Green Morton, dentist, managed himself to perform his first dental extraction under sulfuric ether [9].

In 1839, the world’s first dental school opened its doors in Baltimore. In the same year, the first dental journal, the “American Journal of Dental Science”, was released in New-York. On October 23<sup>th</sup> 1880, the first French dental school opened. It was Paris Dental School, founded by Charles Godon. The first toothbrush appeared at Louis XV’s Court. It was brought back from China. The first toothpaste tubes are commercialized in 1814 [10].

In 1831, James Snell, in England, secured together several components of the dentist workstation to make a single specialized dentist chair. It was the first operation unit for dental surgery. On November 24<sup>th</sup> 1914, a ceremony was held in Boston for the opening of the Forsyth Dental Infirmary for Children. In the clinic treatment room were presented 56 Forsyth Units created by the S. S. White Dental Manufacturing Company. They were all-in-one: the dental chair support frame was secured to a base carrying two columns of the equipment. The “Unit” notion was born. S. S. White commercialized the first sterilizer in 1908. In 1911, the first electric compressed-air compressor was launched by Electro-Dental, giving a new impetus to electro-pneumatic dentistry [4].

William, of Philadelphia, designed the first articulator in 1864. It was a device that simulated the motions of the jaw articulation. The patent on the all-ceramic crown of the same color as a tooth was obtained in 1889 by the dentist Charles Henry Land (Detroit, USA). John M. Riggs, Wells’s associate in Hartford, was the first dentist to specialize exclusively in periodontology. The periodontal disease kept the dentist’s name for a long time. Riggs was opposed to the way in which gum resection was carried out so far, and militated for the elimination of dental plaque, including teeth trimming and polishing. He emphasized the importance of oral hygiene to prevent periodontitis. He was the forerunner of the treatment and dredging of inflamed gums, which he demonstrated in 1856 and published in 1876 only [6].

On January 5<sup>th</sup> 1896, the Dr. Otto Walkhoff, a German dentist,

performed on himself, in Braunschweig, the first dental radiography. 25 min of exposure to X-rays were needed. He used a glass photographic plate, coated with black paper and a rubber dam. The concept of “endodontic” is attributed to the dentist Harry B. Johnston of Atlanta (Georgia), who opened his own office in 1928, exclusively dedicated to endodontics. Around 1850, Bowman obturated for the first time the root canals of an extracted molar with conical gutta-percha sticks [2].

On May 4<sup>th</sup> 1897, 124 persons died in the burning of the Bazar de la Charité. Among them, Sophie-Charlotte, Duchess of Alençon and sister of Sissi, Empress of Austria. The Dr. Isaac Davenport, Sophie-Charlotte’s dentist, provided her dental record on which was noted her 17 consultations staged over 2 years. He identified her body and his report was endorsed by the justice. It was the first time in France [3].

Before 1916, the dentists were stretcher bearers, medics in the army. Under the influence of the Secretary of State for Health, Justin Godart, of Georges Villain, Secretary of the National Dental Federation, and his president Blatter, and with the agreement of Raymond Poincaré, President of the Republic, a decree was published on February 26<sup>th</sup> 1916, creating the post of military dentist in the army “for the duration of the war only.”

Since Charles VIII, women were not allowed to practice surgery anymore. On February 23<sup>rd</sup> 1827, a judgment of the Court of Cassation in the trial brought against Marie Delpuech, female dentist, restored to women the official right to perform dentist’s art. Robert (1846-1873) was the first Afro-American to graduate in a dental school of Harvard in 1869. In 1871, Georges Franklin Grant (1846-1910) was the first Afro-American teacher of the Dental School of Harvard. William Thomas Jefferson (1864-1925) was the first black dentist to practice in the American army from 1895 to 1899 [8].

The first French dental syndicate was created in 1935. It was the CNSD. The first dental convention was signed in 1975 and orthodontists acquired their true status in 1977 [5].

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Dentistry is the science and profession concerned with the study, diagnosis, prevention, and treatment of diseases, abnormalities, or other conditions of the teeth, gums, and adjacent structures of the oral cavity. This autonomous branch of biomedical science includes such activities as treating dental decay, oral surgery, extraction of decayed teeth, straightening teeth and repositioning them for normal occlusion, treatment of diseases of the tissues surrounding teeth, and preventive actions such as Dentistry, profession concerned and the prevention and treatment of oral disease, including diseases of the teeth. Dentistry, in some form, has been practiced since ancient times. For example, Egyptian skulls dating from 2900 to 2750 bce contain evidence of small holes in the jaw in the vicinity of a tooth's roots. Such holes are believed to have been drilled to drain abscesses. In 1530 the first book devoted entirely to dentistry was published in Germany and was written in German instead of Latin. It addressed barber-surgeons and surgeons, who treated the mouth, rather than university-trained physicians, who ignored all diseases of the teeth. Subsequent to this publication, other surgeons published texts incorporating aspects of dental treatment. In 1852, Amalia Assur became the first female dentist in Sweden. She was given special permission from the Royal Board of Health to practice independently as a dentist, despite the fact that the profession was not legally opened to women in Sweden until 1861. Emeline Roberts Jones became the first woman to practice dentistry in the United States in 1855. She married the dentist Daniel Jones when she was a teenager, and became his assistant in 1855 and later on put up her own practice. Rosalie Fougelberg in 1866 became the first woman in Sweden to officially practice dentistry when profession wa