

Pierre Fauchard, The Eminent French Surgeon- Dentist Who presented Ventistry In An Organized Form

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Abstract: Pierre Fauchard (1678-1761), the “Father of Modern Dentistry” in his great book, “le chirurgien dentiste (1728)” (The Surgeon- Dentist) covered the entire field of dentistry.

He collated the considerable body of dental information that had accumulated through millennia, and described the use of lead for filling cavities. The Eminent French surgeon- dentist also emphasized the need for special training of doctors of the teeth. He described alviodontal periostitis (Fauchard disease), and discussed tooth decay, its causes, prevention, and rejected the toothworm theory, but believed that caries were the result of a “humeral imbalance.” Fauchard investigated oral pathology in great detail, and teething problems interested him very much. He dealt with replantation of avulsed teeth and transplantation of teeth from one person to another individual.

Key Words: Fauchard, epick dental work, replantation, and transplantation.

Pierre Fauchard, the Father of Modern Dentistry

Modern dentistry owes its greatest debt to Pierre Fauchard who organized it in a systematic form that all practitioners could benefit it. He was born in Saint- de Gastines, in 1678 and joined the French Navy, shortly settled down in Angers and practiced medicine at the university of Angers Hospital. In 1718 or 1719, Fauchard moved to Paris where in 1723 he wrote his significant book “le chirurgien dentiste” (surgical dentist), a term exceptional at that time. The work, however was not published five years later, in 1728.

In his great book, he covered the entire field of dentistry and many ideas and procedures who advocated or described, two and half centuries later are still current. He discussed tooth decay, its causes and prevention and rejected the toothworm theory, claiming that he had never seen such worms either with the naked eye or microscope. He believed that caries were the result of a humoral imbalance. Fauchard investigated oral pathology in great deal, and teething problems interested him greatly. He emphasized how necessary it is to retain the primary teeth until it is time for them to be shed. Fauchard also dealt with transplantation of teeth from one individual to another.

Glancing at the dentistry of Fauchard’s day

In Fauchard’s day, yet most barbers offered a range of services to their clients, and many advertised themselves as being skillful in extraction. A variety names were given them including *urracheur des dents* (snatcher of teeth) in France, operator for teeth in England, *cavamenti* in Italy, and in

Germany the dentist styled themselves *zahnbrecher* (literally, tooth- breaker). They pursued their vocation wherever the humblest practitioners could attract the dental patients. One of the most common was the marketplace in towns or villages, where they would set up tables or chair under umbrellas or else put up platforms. Sometimes their advertised themselves by flying coloured banners with pictures of sufferers successfully treated, or by hiring drummers, musicians, jugglers, and even sleight- of- hand artists to draw a crowd. Successful practitioners maintained their own shops where, on the evidence of a large number of contemporary genre paintings, more than more extraction was performed. These dentist- barbers lanced abscesses filed and smoothed fractured teeth and performed many other simple dental operation including scaling and cleaning the teeth. Cintio d’Amato, whose “new and useful Practices of All Kinds for Diligent Barber” was published in Italy (1632) emphasized the importance of these measures: “It happens in general that owing to vapors that rise from the stomach, a certain deposit is formed on the teeth, which may be perceived by rubbing them with a rough cloth on waking. One ought, therefore, to rub and clean them every morning, for, if one is not aware of this, or considers it of little account, the teeth become discolored and covered with a thick tartar, which often causes them to decay and to fall out. It is then necessary that the diligent barber should remove the said tartar with the instruments designed for this purpose¹.”

One professor Jacobaens of the University of Copenhagen claimed that after scraping about in a carious cavity he saw a worm, which when extracted and put in water swam energetically about! Another physician, Philip Sammut, main-

tained that by applying rancid oil he was able to drive out toothworms as big as earthworms²! Lazare Riviere, a seventeenth-century professor of medicine at Montpellier (in France), was nothing if not thorough in treating toothache, as the following description quoted in Vincenzo Guerini's History of Dentistry (1909) indicates: "Where the pain was occasioned by hot humors, the treatment began by bleeding in the arm. The following day an aperients was administered. Afterward, if the pain still persisted, the sufferer was cupped in the region of the scapula (the shoulder blade) or spine, blisters were created behind the ears or the nape of the neck; resinous plasters were placed at the temples. In addition to this, various remedies were introduced into the ears, various operations were performed on the aching part itself. And this was followed by extracting the offending tooth³."

But on the whole, one who revolutionized dentistry during the eighteenth century was Pierre Fauchard. Evidence of this is found in Fauchard's epic work entitled "le chirurgien dentiste" (The Surgeon Dentist) which first appeared in 1728. In 1685 (43 years before Fauchard's work), the first book on dentistry entitled "The Operator for the Teeth" authored by a self-styled "professor," Charles Allen, who was in all probability a barber-Surgeon, appeared in English and was reissued twice. In this book Charles Allen gives us little that is new. Dentistry had to wait until the next century to become a true science by the scientific endeavors of Pierre Fauchard. Pierre was born in an unpretending home in Saint-Denis-de-Gastines, Brittany in 1678. At the age of 15, much to his family's distress, he joined the French Royal Navy, and came under the authority of Alexander Poteleret, a surgeon major, who had spent extensive time studying diseases of the teeth and mouth. At the Royal Navy, he found out that sailors who were on long voyages suffered from dental ailments, and scurvy in particular. Eventually Major poteleret encouraged Fauchard to read and carefully investigate the findings of his predecessors in the healing arts. He said he wanted to disseminate the knowledge he learned at sea based on actual practice. This idea led Fauchard to become a combat medic as Poteleret's protégé.

From the Royal Navy to Angers

Once he left the Royal Navy shortly settled down in Angers, city of Western France, and 165 mi. Southwest of Paris. He practiced medicine at the university of Angers Hospital. In Anger, Fauchard often described himself as a "chirurgien dentiste" (surgical dentist), a term exceptional event at the time as dentists extracted decayed teeth rather than treating them. In spite of the limitations of the primitive surgical instruments during Fauchard's time, he was considered a highly skilled surgeon at Angers University Hospital. He made distinguished improvised dental instruments and often adopting tools from watchmakers, jewelers and even babers, that he though could be used in dentistry⁴.

From Anger to Foris and his momentous book

In 1718 or 1719, Fauchard moved from Angers and settled in Paris, where he created his revolutionary work and remained until his death, March 22, 1761⁵.



Pierre Fauchard who stimulated the development of professional literature on dentistry with his *Le Chirurgien Dentiste*.

In Paris, he found out that there is lack of useful textbook on dentistry and that good teaching book of oral surgery was needed, so he decided to write a professional work on dentistry based on his own medical experience for several months, he gathered many medical research works, interviewed some dentists he had met, and reviewed his personal diaries during his stay at Angers to write his manual. In 1723, he completed his revolutionary book, "le chirurgien dentiste, ou, traité des dents" (the Surgeon-Dentist, or, Treatise on the teeth), at the age of 45. The book consisted of 38 chapters in volume 1 and 26 chapters in volume 2, and contained 42 plates depicting surgical instrument and appliances. Many of ideas introduced in the book were totally new to dentistry. Fauchard's epic work, was not published until five years later, 1728. A second edition was published in 1746 which contained more material and more and better illustrations than the first "le chirurgien dentiste", in in 863 pages including two small volumes. The second edition, was the most important book on dentistry to appear and was to remain the authoritative work in field of dentistry during 19th century. The book was well received in the European community, an enlarged edition in French language

was published in 1746. It was issued in German translation in 1733, but it became available in English only in 1946, when Lilian Lindsay, the great dental historian completed the translation.

Fauchard's public methods and address

In Fauchard's time, practitioners of any of the healing arts usually guarded the knowledge and skills jealously and covetously. Fauchard, the "Father of Modern Dentistry" despised such secrecy and made his methods public saying, "I have perfected and also invented several artificial pieces both for substituting a part of the teeth and for remedying their entire loss... and to the prejudice of my own interests, I now give the most exact description possible to them⁶."

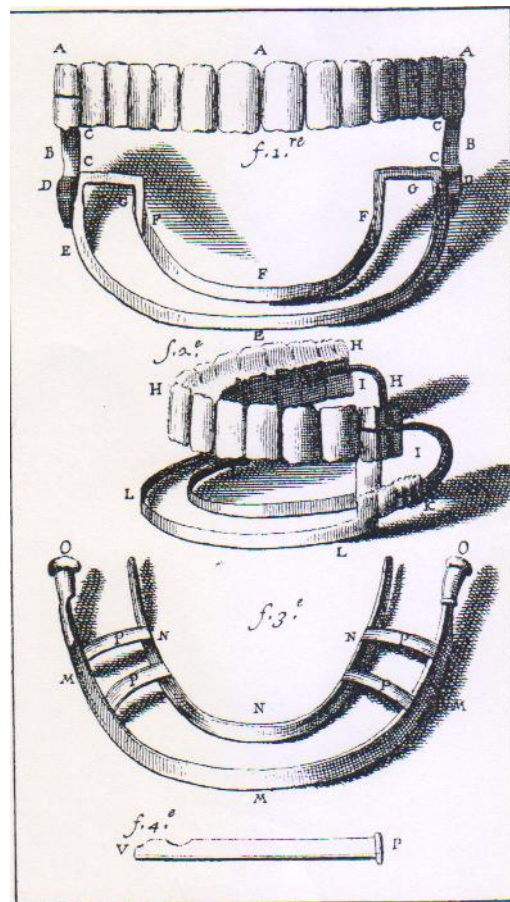
Some of his colleagues became jealous of Fauchard and spread the rumor that he was giving up his practice. The significant and experienced surgeon-dentist responded his book that: "The rumor having been falsely set about that he has abandoned the profession, which rumor cannot have been invented otherwise than by those individuals who, sacrificing honor to interest would attract to themselves the persons who honor the author with their confidence; he therefore finds it necessary to give warning that he still continues the practice of his art in Paris, in the Rue de la comédie Francoise, together with his brother-in-law and sole student, M. Duchemin⁷."

Highlights

- Fauchard discussed tooth decay, its causes and prevention.
- He rejected discussed toothworm theory, claiming that he had never seen such worms either with naked eye or microscope.
- He believed that caries were the result of a humoral imbalance.
- In his "le chirurgien dentiste", Fauchard covered the entire field of dentistry.
- Teething problems interested him greatly, citing various case histories and the treatment he had performed.
- Pierre dealt with replantation of avulsed teeth and transplantation of teeth from one person to another.
- It was Fauchard who coined the term "surgeon-dentist" which the French call their dentists to this day.
- He recommended the use of mouthwashes as part of home care and many formulas concocting.
- He insisted that instead of sitting on the floor with the dentist standing over him the patient be seated "in an armchair which is steady and firm, suitable and comfortable, the back of which should be of horsehair or with a soft pillow raised more or less according to the stature of the patient and particularly to that of the dentist."
- He described Fauchard's disease (alviodontal periostitis),⁸ and how to fill a tooth.

Fauchard's legacy

His epic work influenced many medical minds in France, Europe, and other continent. Writing by others in France followed him rapidly: Robert Bunon (1702-1748), who practiced in Paris and wrote a number of tracts during the 1700s, spent many years of his life in enamel hypoplasia research. Etienne Bourdet (1722-1789), whose "Recherches et observations sur toutes les parties de l'art du dentiste" appeared in 1757 (4 years before Fauchard's death), who is said to be best dentist after Fauchard, based his work mainly on dental prosthesis (a concept introduced by Fauchard). Claude Mouton (died 1781) who later became dentist to the king of France, published in 1746 his *Essay d'odontotechnie*, the first book dealing exclusively with "mechanical dentistry", as dental technology was then called Duchateau, an apothecary in serve, molded the first porcelain denture.



Fauchard's drill to cut into the enamel of natural teeth.

In Germany, the publication of the German edition of Fauchard's work brought about resurgence of dental literature. Before 1742, 150 dental treatises had been published, but yet none of them was written by a dentist. "Abhandlung von den zähnen des menschlichen körpers und deren krankheiten" (Treatise on the Teeth of the Human Body and Their Diseases) was brought out by Philip Pfaff

(1716-1780), dentist to Frederick the Great of Prussia, which was based in large part on Fauchard's book, the "surgical dentist" but also it contained some things that were new. Many other Fauchard's German follower made significant contributions to literature of dentistry. Johann Bücking (1749-1838), was one of them who wrote "Complete Handbook on Tooth Extraction for Practicing Surgeons" in 1782, and Adam Brunner who brought out the "Introductions to the Knowledge Necessary for a dentist" (1965).

American dentists made their own prostheses and many began their career as wood or ivory turners. Probably for this reason dentistry was considered a craft in the United States⁹, but reached its fullest development in the 19th century and afterward, largely due to the efforts of Horace H. Hayden (1768-1844) and Chapin C. Harris (1809-1860)¹⁰, who was instrumental in establishing the first dental college in the world, the first nation-wide association of dentists in the United States, and the first authoritative dental periodical¹¹. Chapin, the great American dentist has made more receptive evaluation than others of Pierre Fauchard: "considering the circumstances under which he lived, Fauchard deserves to be remembered as a noble pioneer and sure founder of dental science. That his practice was crude was due to his time; that it was scientific and comparatively superior and successful, was due to himself¹²."

Triviality

- Fauchard constructed three springless dentures held in place by atmospheric pressure, but he failed to appreciate this principle of retention, which keeps modern dentures in place during use, and did not pursue what would have been a monumental step forward.
- He recommended human urine in the treatment of early stages of caries. Although urine was used for this purpose from the ancient times to Fauchard's time, the treatment met with the resistance of many physicians and patients.
- Fauchard was considered one of the first physicians to denounce medical malpractice in dentistry. He alleged to a tribunal that many dentists in France did not have a degree or experience.

Conclusion and Impact

Dental problems have afflicted men since prehistoric times. The first attempts at treatment probably took place in ancient Egypt and Greece. In the Middle Ages dentistry was practiced by barbers and tooth-drawers, as well as by physicians.

Around the late 16th century dentistry to become distinct from general medicine. Methods were developed for drilling decayed teeth and filling them with soft gold leaf. Pierre Fauchard, the "Father of Dentistry", revolutionized the development of professional literature on dentistry with his "le chirurgien dentiste" in 1728¹³, and dentistry began its pro-

fessionalization as an independent discipline. His significant work became the authoritative text for next generations and was the foundation of subsequent modern dentistry. Writing by others in France and Germany followed him rapidly, and dentistry gradually became a separate speciality in other lands too. In the United States of America, the art of dentistry largely due to the efforts of Horace H. Hayden (1768-1844) and Chapin C. Harris (1809-1860), followers of Fauchard reached its fullest development in the nineteenth century and forward.

Fauchard's initiative in offering the public the benefit of his experience led other dentists to follow his example, and soon the dental surgeons and dentists of France and other countries were freely publishing the knowledge and techniques of dentistry. Fauchard effectively set dentistry on its own circumscribed field of duties and services and its own name. On the whole, modern dentistry owes its greatest debt to Pierre Fauchard.

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