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Chapter 1

HISTORY OF DENTISTRY

Dentistry (greek: *stoma* — mouth, *logos* — teaching) is a medical discipline that studies the etiology and pathogenesis of diseases of the teeth, jaws and other organs of the oral cavity, their diagnosis, treatment and prevention.

Propedeutics (greek: *pro* — before, *pedia* — train) — pre-training before starting a clinical appointment.

HISTORY OF DENTISTRY IN THE WORLD

In the early Latin dialect, there was no separate word for the dental profession, since dentistry itself was considered part of General medical practice. The encyclopedist Celsus (fig. 1.1) in his books described in detail the surgical instruments of his time including forceps and the tool «tenaculum» designed to remove teeth (fig. 1.2).

Celsus was the author of one of the most authoritative treatises «On medicine», which served as a textbook for doctors until the late middle ages. It discussed many problems of dentistry, contained recommendations for basic oral hygiene and described the signs of various dental diseases. In addition to treating and removing teeth, ancient Roman doctors restored teeth with gold crowns and made bridge-like structures (fig. 1.3).

From the content of the Talmud, it can be concluded that the ancient Jews were also known for artificial teeth and gold crowns. They were mostly used by women, apparently for cosmetic purposes. In addition, this book contains references to preventive actions to prevent dental diseases, the harm and benefits of certain types of food. The results of archaeological excavations in the Middle East give reason to believe that among the Phoenicians there were craftsmen who carried



Fig. 1.1. Celsius

out complex dental restorations at that time. The main method of treatment of dental ailments in Ancient Egypt was tooth extraction. The Egyptians also practiced drilling the jawbones to reduce the pressure of the purulent fluid that accumulates near the inflamed tooth (fig. 1.4).

During the early middle Ages, Europe was content with medical practice, which was carried out by Jewish and Muslim doctors, and any significant dental achievements this period was not marked.



Fig. 1.2. Bronze forceps, an ancient Roman dentist's tool. Nemzeti Museum, Budapest

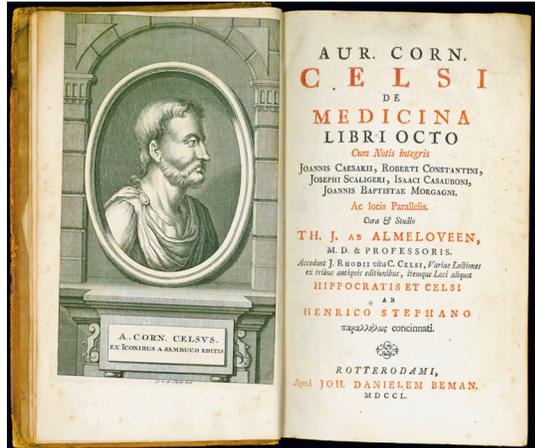


Fig. 1.3. Cornelius Celsius' treatise «On medicine»



Fig. 1.4. Holes in the jaw drilled to reduce the pressure of exudate accumulating at the root of the tooth. Museum of Man, Paris

The history of dentistry as a medical specialty dates back to the late 17th – early 18th centuries. And it is connected, first of all, with the works of the outstanding French doctor Pierre Fauchard (fig. 1.5). In 1728, in Paris, his scientific work «The Surgeon Dentist, or Treatise on the Teeth» was published, which summarized all the previous experience of dentistry and laid the scientific foundations of therapeutic, surgical, orthopedic dentistry and orthodontics. He was the first to apply dental fillings using lead foil and developed the principles of surgical treatment of wounds including the maxillofacial area.

In 1871, James B. Morrison patented the first industrially produced «foot dental engine», which revolutionized practical dentistry by being inexpensive and able to develop sufficient speed for high-quality preparation of enamel and dentin. And in 1876, the company «S.S. White» began mass production of an improved version of the Morrison drill with a flexible sleeve.

The same company began to produce tips and drill bits. The development of artificial gold crowns, filling teeth with silver amalgam, the use of arsenic acid to necrotize the pulp and the invention of the drill finally approved the specialty «dentistry». And finally, in 1957, John Bardeen introduced the high-speed turbine tip, which reached speed of up to 300.000 revolutions per minute, was a huge commercial success, and marked the beginning of a new era of high-speed dentistry (fig. 1.6).



Fig. 1.5. Pierre Fauchard



Fig. 1.6. One of the first dental units

HISTORY OF DENTISTRY IN RUSSIA

In the old Russian state, the treatment of patients was carried out by folk healers — «lechtsy», who received knowledge in family schools. It was only in 1620, that the Apothecary's order was created, which became the highest body of medical management. Until the 17th century, dentistry in Russia was not controlled by the state. Folk healers of the teeth widely used drugs of plant origin, strengthened the teeth by a wire, conducted the removal of teeth. For the first time, the right to practice dentistry in Russia was granted to the Frenchman Francois Dubrel in 1710. In the same year, the title of «dentist» was introduced in Russia. Dental skills were taught more widely in the course of surgery. And in 1810, a law was passed that granted the right to practice medicine only to those who received a diploma of «dental doctor». In 1829, women also received the right to take the exam for the title of dental doctor. The first female dentist was Maria Nazon, a native of Warsaw, who graduated from the Moscow Medical and Surgical Academy.

In the Russian special literature of the late 18th – early 19th centuries, dental diseases and their treatment were covered in manuals on surgery. So, in the «Art of midwifer» (1784–1786), N.M. Maksimovich-Ambodik, the first Russian physician who received the title of Professor of obstetrics, described in detail the diseases of the oral cavity during pregnancy: pulpitis, gum disease, thrush (i.e., stomatitis), defects in the frenulum of the tongue. He was the first to suggest surgical treatment for «harelip» (cleft lip).

The founder of an independent Russian anatomical school P.A. Zagorsky in «Abbreviated anatomy» (1802) described in detail the basics of anatomy of the maxillofacial region. I.F. Bush, founder of the St. Petersburg surgical school, Professor of the St. Petersburg Medical and Surgical Academy, in the «Guide to teaching surgery» (1807–1808) presented the basics of therapeutic and surgical dentistry, dental prosthetic care and prevention of dental diseases.

The next step in the development of dental education in Russia was the adoption the law in 1838, according to which the title of «dentist» and the right to work independently was awarded after passing the exam at the medical Academy. However, there were no separate courses in deontology even at the medical faculty of the Imperial Moscow University. The first dental school was opened in 1881 in St. Petersburg by a private dentist F.I. Vazhinsky. Training at the school lasted 2.5 years and ended by passing the exam at the medical and surgical Academy or at the medical faculty of the University and getting the title of dentist with the right to prescribe medicine. The first dental school in Moscow was organized in 1892 by I.M. Kovarsky. After 2.5 years of study,

students took final exams in the following subjects: dentistry and prosthetic dentistry, anatomy (general and private), histology and physiology, surgery (general and private), general pathology, general diagnostics and therapy, pharmacology and prescription. In 1898, there were already 9 dental schools in universities in Russia.

In 1883, the first scientific society of dentists in Russia was organized in St. Petersburg; and in 1885, the Dental Bulletin was established. The appearance of the magazine made it possible to unite disparate societies of dentists in different cities in a short time. In 1889, the Moscow odontological society established its own journal «Odontological review». The first all-Russian odontological congress, which was held in Nizhny Novgorod in 1896, played a huge role in uniting dentists in Russia. In addition to scientific issues, the congress also discussed the training of dental personnel. And in 1900, the training of dentists through apprenticeships in dental offices was officially abolished.

In 1885, at the medical faculty of Moscow University, on the initiative of N.V. Sklifosovsky (fig. 1.7), the first associate Professor of odontology in Russia was appointed at the faculty surgical clinic. The first private associate Professor was N.N. Znamensky. In 1892, the position of associate Professor of dental diseases was opened at the Military Medical Academy. Its founder was private associate Professor P.F. Fedorov, who was the head of it for 22 years. The creation and activity of odontological docents were of exceptional importance for the formation of odontology as an independent scientific and academic discipline. The first independent department of odontology in Russia was opened in 1892 at the Imperial Clinical Institute of Grand Duchess Elena Pavlovna. A series of lectures on odontology was given by A.K. Limberg, who in 1899 opened another odontology department at the St. Petersburg Women's Medical Institute. In 1891, A.K. Limberg defended his first dissertation on odontology on the topic «Modern prevention and therapy of dental caries».



Fig. 1.7. N.V. Sklifosovsky