

## E4 ORAL PRESENTATION – FULL ARTICLE

# Evolution of Stomatology through the Museum of Dentistry of Catalonia

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**ABSTRACT: Background and objectives:** From ancient Greece we have inherited the first texts written by physicians who passed on their knowledge of pathologies affecting the oral region. The aim of this work is to highlight the continuity in the transmission of dental knowledge within medicine. **Materials and Methods:** The material for this text has been obtained from previous publications by the author, which demonstrate the contribution of stomatology and stomatologist physicians, and relate it to the items catalogued in the Museum of Dentistry of the College of Dentists and Stomatologists of Catalonia. **Results:** There are two parallel paths in oral health care between medicine and dentistry. Physicians and surgeons have always contributed their knowledge of oral pathologies as part of the overall set of human diseases. The development of stomatology took shape at the Stomatological Institute of Barcelona and at the Hospital of the Holy Cross and Saint Paul in Barcelona, until the teaching of stomatology was established at the Complutense University of Madrid and, years later, at the University of Barcelona. **Conclusions:** There were periods of interaction between medicine and dentistry from the second half of the 19th century onward, with alternating phases until the present day, when dentistry has become part of the Health Sciences. Portugal, along with some European countries such as Belgium, continues to uphold the tradition of stomatology at a high level.

**KEYWORDS:** History, Stomatology, Dentistry Museum, Catalonia

## BACKGROUND AND OBJECTIVES

The health of the earliest settlers was in the hands of those who stood out most due to their ability to dominate the group, and their therapeutic tools were none other than intuition and empiricism. Over time, the settlers organized and defended themselves. When the group had an army engaged in combat, they needed someone capable of treating wounds and diseases. In *History of Spanish Military Health* (Barcelona, 1994), José María Massons describes how physicians and surgeons

accompanied the troops, prepared to act, even to extract teeth. Physicians first and surgeons later would follow a line of progressive advancement based on the study of diseases and their relationship with the oral cavity. They possessed extensive knowledge of the oral cavity.

## MATERIALS AND METHODS

The material for this text was obtained from previous publications by the author, which demonstrate the contribution of stomatology and stomatologist

physicians, and relate it to the items catalogued in the Museum of Dentistry of the College of Dentists and Stomatologists of Catalonia.

## RESULTS

**Hippocrates:** In *Aphorisms*, he addresses disorders resulting from tooth eruption. In *Epidemics*, he describes a suborbital abscess and a case of gangrene of the mouth with destruction of the palatine bone, collapse of the nose, and ocular complications. In *Joints*, he describes the temporomandibular joint and its dislocation. Mandibular fractures are classified according to displacement, and he recommends restoring the joint using different types of retention: dental ligatures and leather bandages. Regarding dental therapy, he discusses the fixation of loose teeth using a gold wire attached to adjacent teeth.

**Avicenna:** In *The Canon*, he describes dental anatomy and physiology. He gives advice on avoiding the mistake of extracting the wrong tooth and recommends performing extractions with great care to prevent mandibular fractures and the spread of infections. He dedicates a chapter to dental prophylaxis, recommending rubbing the teeth with rose oil before bedtime. He also describes an original toothpaste made of salt, roasted or not, mixed with honey.

**Galen:** He believed that teeth received their nerves from the brain and that caries were caused by a corrupt humor. For pain, he recommended hot applications and, if pain persisted, drilling the tooth and inserting appropriate remedies through the opening using a probe. If this failed, extraction became necessary, requiring the precise application of a mixture of pyrethrum and vinegar to loosen the tooth so it could be easily removed, using forceps or even fingers. Professor Dr. Amélia Rincón illustrates the thumb and index finger as the first forceps on the cover of her book *History of Medicine*.

**Arnau de Vilanova:** In *Breviarium Practicae*, he explains that toothache sometimes originates from a cerebral defect caused by cold humors. Rahola reviewed, in the Archives of the Crown of Aragon, a 15th-century printed volume compiling his works. From the medical section, there are two books on cosmetics – *De ornatu mulierum* and *De decoratione* – from which recipes are extracted to whiten teeth and color and strengthen gums. In *Regimen sanitatis ad regem Aragonum*, he states that upon waking, it is necessary to clean and rub the

teeth, as dirt causes halitosis. To keep teeth healthy, he recommends cleaning them twice a month with wine in which thyme root has been boiled.

**Guy de Chauliac:** The Inventory or Collection of Surgery, or *Chirurgia Magna*, is divided into seven books. Book IV deals with apthae; Book V explains mandibular fractures; and Book VI addresses diseases other than ulcers, such as those affecting the tongue and teeth, and describes the various stages of caries: pain from cold and heat, spontaneous pain, and pustules on the gums.

However, there was another non-medical approach that in the Middle Ages generally had very low social recognition. These practitioners acted as itinerants, known as “money hunters”. They performed juggling and sleight-of-hand shows to attract audiences to their barber-surgeon trade, carrying out minor cures and selling a universal remedy – the “Universal Panacea” – which may have contained cocaine. Among their skills was tooth extraction, although patients sometimes died.

During the 14th century, under the reign of King Peter III “the Ceremonious” (1319–1387) of the Crown of Aragon, the specialty of the *Mestre Caxaler* appeared: Master of the Jaw or Molar. This was a period of intellectual optimism and confidence in human capabilities. Cities emerged, General Studies were created, and Thomas Aquinas influenced the intellectual world by synthesizing Aristotelianism and Platonism. These practitioners had no regulated studies, only practice, but they had to pass a qualification test. Their professional activities included cleaning teeth, treating pain, and performing extractions, sometimes combined with bloodletting. They also used empirical procedures, some of which were later scientifically validated.

### Parallel Path (18th–19th Centuries)

A new period began in the 18th century with the creation of Colleges of Surgery to train surgeons for the Navy. Three types of qualifications were awarded: Latin Surgeons, Vernacular Surgeons, and Bloodletters. Bloodletters represented the first step toward professionalization, moving from empiricism toward formal study and regulation. This century marked the renaissance of dentistry, parallel to surgical advances, driven largely by European influence, particularly from French and Italian professionals.



From this point onward, a duality emerged: Stomatology versus Dentistry. The profession followed two parallel paths – physicians and surgeons with academic training, and bloodletters with empirical backgrounds. In 1875, a true attempt at regulation occurred with the creation of the title of Dental Surgeon. Later, at the turn of the century, the title of Odontologist was established, followed by the creation of formal schools and hospital-based teaching.

### From Stomatology to the New Dentistry

With Spain's entry into the European Economic Community, the official degree in Dentistry was created. Laws enacted in 1986 and 1994 structured the dental health professions, marking a complete transformation of oral health education and practice. The shift from stomatology as a medical specialty to dentistry as an independent degree represented a significant change in both training and professional qualification.

### Corollary

From an empirical standpoint, dentistry followed two parallel paths – medical and dental – reaching high levels of technological development. Whether physicians or not, dentists have consistently sought to belong to the health sciences, maintaining mixed professional titles such as dental surgeon in the United States and Europe, or medical dentist in Portugal.

### CONCLUSIONS

There were periods of interaction between medicine and dentistry from the second half of the 19th century to the present day, during which dentistry became integrated into the Health Sciences. Portugal, along with some European countries such as Belgium, continues to preserve the tradition of stomatology at a high level.

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