

МЕДИЦИНА, ПЕДАГОГИКА И ТЕХНОЛОГИЯ: ТЕОРИЯ И ПРАКТИКА

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THE ROLE OF DENTISTRY IN ANCIENT EGYPTIAN MEDICINE

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Abstract

Ancient Egyptian medicine represents one of the earliest systematic medical traditions in human history, combining empirical observation, pharmacological knowledge, and spiritual beliefs. Dentistry occupied a significant yet often underestimated role within this medical system. Archaeological evidence, including skeletal remains, medical papyri, and dental prosthetics, reveals that dental diseases were widespread in ancient Egypt and that specialized approaches were developed to manage oral health conditions. This article explores the role of dentistry in ancient Egyptian medicine by examining dental pathologies, therapeutic practices, professional specialization, and cultural beliefs related to oral health. Through an interdisciplinary analysis integrating dental anthropology, archaeology, and medical history, this study demonstrates that Egyptian dental practices laid important conceptual foundations for later medical traditions. Understanding ancient Egyptian dentistry provides valuable insights into the origins of preventive care, pain management, and the holistic view of health that continues to influence modern dentistry.

Keywords: Ancient Egyptian Medicine, History of Dentistry, Dental Diseases, Medical Papyri, Archaeological Evidence

1. Introduction

Ancient Egypt is widely recognized as one of the cradles of organized medicine. Dating back more than five millennia, Egyptian medical knowledge influenced Greek, Roman, and later Islamic medical traditions. While much scholarly attention has been devoted to Egyptian surgery, pharmacology, and anatomy, the role of dentistry within this medical system has received comparatively less focus.

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Dental diseases were common in ancient Egypt due to dietary habits that included coarse bread contaminated with sand particles from grinding stones. As a result, severe tooth wear, periodontal disease, abscesses, and tooth loss were prevalent across all social classes. These widespread conditions necessitated the development of dental knowledge and therapeutic strategies within the broader framework of Egyptian medicine.

The purpose of this article is to examine the role of dentistry in ancient Egyptian medicine by analyzing archaeological and textual evidence. The study aims to demonstrate that dentistry was not an isolated practice but an integral component of Egyptian healthcare, closely connected to medical theory, religious beliefs, and social organization.

2. Literature Review

Scholarly interest in ancient Egyptian dentistry has grown steadily since the nineteenth century, following the decipherment of hieroglyphic texts and the systematic excavation of burial sites. Early studies focused primarily on descriptions of dental diseases observed in mummified remains, while later research incorporated textual analysis of medical papyri.

The **Ebers Papyrus** (c. 1550 BCE) and the **Edwin Smith Papyrus** are among the most important sources for understanding Egyptian medical knowledge. Although these texts do not describe dentistry as a separate profession, they include numerous references to oral conditions, tooth pain, and treatments involving the mouth and jaw.

Bioarchaeological studies of Egyptian skeletal remains consistently report extreme dental attrition, high prevalence of periodontal disease, and frequent dental abscesses. Scholars such as Hillson and Lucas argue that these findings indicate both the severity of oral health challenges and the Egyptians' attempts to manage them through medicinal and mechanical interventions.

Some researchers suggest the existence of specialized practitioners, citing titles such as "Chief of the Toothers" found in tomb inscriptions. However, debate continues regarding the degree of professional specialization in Egyptian dentistry. Despite this uncertainty, the literature clearly supports the conclusion that oral health played a significant role in Egyptian medical practice.

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3. Methodology

This study employs a qualitative historical and bioarchaeological methodology based on secondary source analysis. Data were collected from peer-reviewed journal articles, archaeological excavation reports, translations of Egyptian medical papyri, and monographs on ancient medicine.

The methodological approach includes:

Textual analysis of medical papyri referencing oral diseases and treatments

Osteological analysis reported in archaeological literature to identify dental pathologies

Comparative analysis between Egyptian dentistry and other ancient medical traditions

An interdisciplinary framework combining dental anthropology, paleopathology, and medical history was used to interpret findings within their cultural and environmental contexts. Emphasis was placed on understanding dental practices as part of a holistic medical system rather than as isolated technical procedures.

4. Results

4.1 Prevalence of Dental Diseases in Ancient Egypt

Archaeological evidence from mummified remains and skeletal assemblages demonstrates that dental diseases were widespread in ancient Egypt. Severe tooth wear was nearly universal among adults, resulting from diets rich in stone-ground grains. This wear often led to pulp exposure, chronic infection, and abscess formation.

Periodontal disease was also highly prevalent, characterized by alveolar bone loss and antemortem tooth loss. These conditions affected individuals across all social strata, including royalty, indicating that dental disease was a systemic public health issue.

4.2 Dental Treatments and Therapeutic Practices

Egyptian medical papyri describe various treatments for oral conditions. Remedies included herbal mixtures, honey-based antiseptics, and mineral compounds applied to affected teeth or gums. Honey, known for its antibacterial properties, was frequently used in wound management and likely provided some therapeutic benefit.

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Mechanical interventions appear to have been limited but not absent. Archaeological discoveries of gold wire dental appliances suggest attempts at tooth stabilization or prosthetic replacement. While extraction was likely performed in severe cases, evidence indicates that Egyptian practitioners prioritized symptom relief and infection control.

4.3 Dentistry and Medical Theory

Ancient Egyptian medicine was based on a combination of empirical observation and spiritual beliefs. Disease was often attributed to imbalances within the body or the influence of supernatural forces. Dental pain, like other ailments, could be treated through both physical remedies and magical incantations.

This holistic approach reflects an early understanding of the interconnectedness of bodily systems. Oral health was not viewed in isolation but as an integral component of overall well-being, a concept that resonates with modern preventive dentistry.

4.4 Professional Roles and Specialization

Although there is limited direct evidence for formally trained dentists, inscriptions and tomb reliefs suggest the presence of medical practitioners with specialized knowledge of oral conditions. The title “Iry-ibeh,” often translated as “dentist,” supports the notion that dentistry held a recognized position within Egyptian medicine.

The integration of dentistry into temple-based medical practice further underscores its institutional importance. Medical knowledge was closely associated with religious authority, reinforcing the social legitimacy of dental treatments.

5. Discussion

The findings demonstrate that dentistry played a meaningful role in ancient Egyptian medicine, addressing widespread oral health challenges through a combination of empirical treatment and spiritual practice. While limited by the absence of modern technology, Egyptian practitioners demonstrated remarkable ingenuity in managing dental disease.

The emphasis on symptom relief, infection control, and holistic care reflects principles that remain central to modern dentistry. Furthermore, the integration of dentistry into a broader medical and religious framework highlights the cultural dimensions of healthcare.

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Comparatively, Egyptian dental practices were more advanced than those of many contemporaneous societies, particularly in their use of pharmacological substances and prosthetic materials. These contributions influenced subsequent medical traditions and represent an important chapter in the global history of dentistry.

6. Conclusion

Dentistry in ancient Egyptian medicine was a vital component of one of the world's earliest healthcare systems. Archaeological and textual evidence reveals that Egyptians recognized the significance of oral health and developed strategies to address dental diseases within the constraints of their time.

This study underscores the importance of ancient Egyptian contributions to the evolution of dentistry. By examining these early practices, modern dental professionals can gain valuable historical perspective on the enduring challenges of oral disease and the foundational principles of holistic care.

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