



ATLAS OF ORAL DISEASES FOR UNDERGRADUATE STUDENTS OF DENTAL MEDICINE

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Background

New technologies, diagnostic and therapeutic procedures require from students deeper and more accurate information about the various methods and treatment options of periodontal and oral mucosal diseases. Replenishment of existing information with new is one of the basic principles to maintain the technological progress in one of the fastest growing areas of dentistry. The aim of educators is to transmit subject matter clearly and comprehensibly. One photo is worth a lot of words. Up to recent, students did not have coherent and comprehensive dental web-based database of periodontal and mucosal diseases. There were no available audio-visual publications dealing with diagnostic and therapeutic procedures for diseases of the oral cavity.

Teaching undergraduate students in dentistry consists of lectures, seminars and practical exercises. During practical training doctors are showing students the greatest possible number of different types of diseases of the oral cavity. Yet, only limited number of patients with oral mucosa lesions can be seen during pregradual practice. The number of disease that affects the mucous membranes of the mouth is so big that it is not possible to show all types or all stages of various diseases. The oral mucosa diseases may change rapidly during time which has an impact on the differential diagnosis. Students usually see the patient only once and cannot evaluate the course of the disease. For students' appropriate training it is necessary to see as many patients as possible and to inspect the oral mucosa lesions in all stages. Furthermore, in the oral cavity a large number of rare syndromes can be seen. Knowledge of oral mucosa diseases is for students of dentistry is very



important. Proper visualization provides significant help in the differential diagnosis and therapy of mucosal lesions.

Summary of work

The aim of the project was to create the atlas of oral mucosa lesions with completely original, anonymous database, accompanied by legends and labels. Partial project objectives were:

- 1) Acquisition of visual and audio-visual recordings of diagnosis, prevention and treatment of periodontal disease and oral mucosa diseases in patients treated at the Department of Periodontics, Clinic of Dentistry, St. Anne's Faculty Hospital, Faculty of Medicine, Masaryk University, Brno, Czech Republic. Patients signed informed consent prior to examination after detailed explanation was provided.
- 2) Anonymisation of documentation. Identifiable information was removed for further processing to avoid misuse of patients' personal information.
- 3) Preparation and sorting of data.
- 4) Creation of legends and instructive descriptions.
- 5) Development of web-based online database with free access for students of Medical Faculty, Masaryk University, Brno and access to candidates from other faculties in Czech Republic.

Summary of results

More than 400 pictures are divided into 12 chapters and 120+ sub chapters. First ten chapters are presented in the same order as in "Repetitorium onemocnění sliznice dutiny ústní" (authors: L. Izakovičová-Hollá, A Fassmann) – textbook of Oral mucosa diseases created by authors from our clinics. Each chapter covers one anatomical or functional part of oral mucosa. There are two complementary chapters which are documented to limited extend (Tumors and Periodontology) and will be expanded during 2012. The chapters are:

- 1) Notes on the morphology of the oral mucosa
- 2) Pathological processes involving the oral mucosa
- 3) Normal anatomical variations
- 4) Lips pathology
- 5) Tongue pathology



- 6) Disorders of salivary secretion
- 7) Foetor ex ore (halitosis)
- 8) Mucosal lesions of the oral cavity with a characteristic finding
- 9) Manifestations of systemic diseases in the oral cavity
- 10) Precanceroses
- 11) Tumors
- 12) Periodontology

There is also index and search tools for quick orientation among chapters and diseases.

Conclusions

This project significantly expands the image and audio-visual documentation, and improves the quality of study materials for students of dental medicine. Materials will be beneficial not only for students, but also for dentists who will be able to use the atlas to maintain the knowledge of pathological processes manifested in the oral cavity during yearly practical training at Department of Periodontics. High quality visual documentation will be continuously updated with new and interesting cases in future years. The atlas placement on the servers of our university will ensure long-term usability and sustainability of project outputs. This database will complement existing textbooks, which often lack high-quality image documentation. The database can be updated according to the newest knowledge and scientific findings. The materials can be used for testing as a part of the written exam.

Take-home message

The atlas is a useful tool to improve the knowledge of the oral mucosa diseases in undergraduate students of dental medicine.

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