EuroSciCon

7th Euroscicon Conference on

Clinical Pathology and Epidemiology

February 27-28, 2019
Prague, Czech Republic

Peter Stoemmer et al,, J Infec Dis Treat 2019, Volume: 5
DOI: 10.21767/2472-1093-C1-008

CYSTS OF THE YAWS: STRUCTURE, INFLAMMATION AND BACTERIAL COLONIZATION AS PROMOTERS OF PATHOGENESIS

Peter Stoemmer, Gerhard Stoemmer and Anja Meyer
University Erlangen-Nuremberg, Germany

Introduction: Cystic lesions of the gingiva and the jaws are common specimen in oral surgical pathology. Besides of many rare types of neoplastic and non-neoplastic cysts, the greater parts are inflammatory periapical (radicular) cysts and odontogenic cysts: follicular (dentigerous) cysts. In spite of their common connection to embryologic structures, their pathogenesis and morphology is completely different. We analyzed their morphology and the role of different bacteria in this context.

Materials & Methods: 20 cases of odontogenic cysts of different localizations were stained by using conventional methods with Hematoxylin-Eosin, Trichrome and IHC for Tenascin C; characteristic parts of them were isolated and bacterial DNA was analyzed by PCR and hybridized to a strip (reversed line probe assay, AID-strip assay); 12 of the most important oral pathogenic bacteria and interleukins IL1A, IL1B risk factor HLA-DR4 were analyzed.

Results & Conclusions: The plethora of oral and maxillofacial cysts is divided into cysts of developmental origin, derived from odontogenic, i.e. tooth-forming embryologic; fetal structures; inflammatory or post-inflammatory origin. Their histological structures are completely different and in most cases, preserved even in longstanding cysts: follicular (dentigerous) cysts originates from an unerupted, encloses the crown and is connected to the cement enamel junction. Their epithelium is rather flat with few layers of flat or prismatic non-keratinisized epithelium, derived from Malassez epithelium. Their surrounding soft tissue wall is nearly free of inflammatory cells. In contrast, inflammatory radicular cysts contain no teeth, are connected to the root of teeth with pulpitis and show highly inflammatatory infiltration: granulocytes, lymphocytes and plasmacells. They have a broad, proliferating squamous non-keratinizing epithelium. Bacterial colonization correlates to the type of the cyst: in radicular (apical) cysts, highly aggressive bacteria were found such as *Porphyromonas gingivalis (50%), Tannerella forsythia (10%) and Treponema denticola (10%);* in 30%, no bacterial DNA was found. All cysts contained *Fusobacterium nucleatum* (100%). In follicular cysts, only *Tannerella forsythia* (15%), *Campylobacter rectus* (15%) and *Fusobacterium nucleatum* (100%) were found. Further investigation is necessary for the analysis of cause and consequence of the different bacterial colonization.

Biography

Peter Stoemmer is a Consultant in Surgical and Anatomic Pathology at the University of Erlangen-Nuremberg. He is a Fellow of the College of American Pathologist and the Director of the Institute of Pathology Hermanstr1 in Augsburg and Lecturer at University of Erlangen Nuremberg. He has received his professor and his doctorates from the University of Erlangen-Nuremberg and studied Molecular Pathology at the University of Westminster. He is *Facharzt für Pathologie* and a Member of the K V Bayern. His institute is accredited according to the strictest rules of DAKKs.

profstoemmer@gmail.com