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TUMOR-LIKE PERIODONTAL DISEASES: DIFFERENTIAL DIAGNOSIS.

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ANNOTATION: The study emphasizes the need for comprehensive histological examinations to enhance diagnostic accuracy and differentiate between genuine neoplasms and inflammatory or reactive lesions in periodontal conditions, due to the complex multifactorial nature of periodontitis.

Keywords: histological research, examination of periodontal diseases, periodontal tissues. Periodontal ligament attachment loss. Tumor-like diseases. ulcerative necrotic gingivitis and acute periodontitis.

АННОТАЦИЯ: В исследовании подчеркивается необходимость проведения комплексных гистологических исследований для повышения точности диагностики и дифференциации между подлинными новообразованиями и воспалительными или реактивными поражениями пародонта, что обусловлено сложной многофакторной природой пародонтита.

Ключевые слова: гистологическое исследование, изучение заболеваний пародонта тканей пародонта и нарушение прикрепления пародонтальных связок опухолевидные заболевания. Язвенно-некротический гингивит и острый пародонтит.

ANNOTATSIIYA: Tadqiqotda parodontitning murakkab ko'p omilli tabiati tufayli haqiqiy o'smalar va parodontning yallig'lanish yoki reaktiv shikastlanishlari o'rtasida tashxis qo'yish va farqlash aniqligini oshirish uchun keng qamrovli gistologik tadqiqotlar o'tkazish zarurligi ta'kidlangan.

Kalit so'zlar: gistologik tekshiruv, parodont kasalliklarini, parodont to'qimalarini o'rganish. Parodont boylamlari birikishining buzilishi o'smasimon kasalliklar yarali-nekrotik gingivitis va o'tkir parodontiti.

Introduction: The differential diagnosis of tumor-like periodontal disorders is a complicated domain necessitating meticulous evaluation of diverse clinical presentations and underlying pathophysiological processes. Numerous research have enhanced our comprehension of these disorders, underscoring the necessity of precise diagnosis to distinguish between authentic neoplastic processes and inflammatory or reactive lesions.

The periodontal symptoms linked to Histiocytosis X were examined by (Artzi et al., 1989), who emphasised that because of its clinical presentation, this disorder can resemble periodontal disease(1). The authors emphasised that histological investigation is essential for differentiating Histiocytosis X from other periodontal illnesses, as it may exhibit considerable periodontal involvement that could be confused with more prevalent forms of periodontitis.

In a more general setting, looked at whether individuals with various types of periodontitis had autoantibodies against extracellular matrix components (4) . Their findings show that changes in immune response may aid in the differential diagnosis of periodontal illnesses, since increased levels of certain autoantibodies could signify a more aggressive disease phenotype, potentially reflecting tumor-like manifestations.

In their discussion of the function of antimicrobial peptides (AMPs) in periodontal innate defence, (6) sease may function as a diagnostic biomarker. The expression levels of AMPs may aid in distinguishing between different periodontal diseases, particularly those exhibiting tumor-like characteristics.

The categorisation of periodontal lesions has also been addressed by (7), who presented a new clinical classification for endodontic-periodontal lesions. This classification seeks to enhance diagnostic precision, especially in instances where the clinical manifestation may indicate a neoplastic process instead of an inflammatory one. The differential diagnosis of tumor-like periodontal disorders necessitates a comprehensive approach encompassing clinical evaluation, histological analysis, and assessment of immunological responses. The reviewed studies highlight the importance of differentiating between genuine neoplasms and inflammatory or reactive lesions to guarantee suitable management and treatment approaches.

Currently, we conduct a fundamental set of clinical examinations in an outpatient setting to diagnose periodontal diseases(11). These evaluations include assessment of gingival health, measurement of periodontal ligament attachment loss, detection of supra- and subgingival deposits, and analysis of alveolar bone resorption with radiographs(12). Although patient history, clinical examination, and periodontal indices are all important components of the diagnostic process, the dental community has held varying opinions on the utility of these indices owing to the lack of standardization among them. Therefore, numerous practitioners continue to hesitate to integrate these indices into their daily practices. Furthermore, evaluating oral hygiene status and the severity of existing periodontal damage has a limited diagnostic value. The purpose of periodontal diagnosis is not primarily concerned with the identification of disease presence; rather, it is designed to identify the specific disease that is responsible for observable changes in periodontal tissues. This process necessitates the differentiation between diagnostic signs, which frequently exhibit comparable clinical presentations and symptoms. Conventional examination methods, when strictly focused on inflammatory and degenerative changes within periodontal tissues, are generally sufficient to distinguish these conditions. Unfortunately, conventional diagnostic methods are inadequate for tumors and tumor-like diseases that affect the buccal cavity and periodontium.

Additionally, the constraints of ambulatory settings in modern dental clinics frequently preclude the use of supplementary laboratory investigations such as histological analysis of biopsies obtained through surgical periodontal treatments.

The purpose of the work: The aim of our work was to clearly illustrate the necessity of a more thorough and in-depth examination of a patient with periodontal illness for diagnostic purposes, including the identification of tumors and tumor-like periodontal diseases.

Methods and materials: This study examines the basic principles of the differential diagnosis of inflammatory dystrophic periodontal diseases. In this study, gingivitis was identified as the primary differential diagnosis. Gingivitis should be identified as different from other periodontal diseases because there are no changes in the bone tissue of the alveoli, which is an important part of the periodontal complex.

The severity of gingivitis is based on the overall changes in the body noted during patient interviews and the extent to which the gums are affected by the disease. Differential diagnoses of chronic, catarrhal, and hypertrophic (edematous form) gingivitis are linked by similar signs: patients often mention bleeding gums and changes in the appearance of the gum line. Catarrhal inflammation typically precedes proliferation, which is indicative of hypertrophic gingivitis. Consequently, one mandible displayed catarrhal gingivitis, whereas the other displayed hypertrophic gingivitis. The presence of various general somatic diseases that cause gingivitis in the examined patients is a major cause of these distinctive indications. Cardiovascular, gastrointestinal, infectious, and blood diseases (lymphocytic and myeloleukemia) are the most common causes of catarrhal gingivitis. Endocrine disorders, certain medications, and blood diseases (e.g., leukemic reticulosis) are potential causes of hypertrophic gingivitis. As a result, the signs will be different: catarrhal gingivitis will show swelling and redness of the gum tissue between the teeth and along the gum line, whereas hypertrophic gingivitis will have larger gum areas, noticeable changes in the gum shape, a bluish color, and the development of false pockets around the teeth. In the acute stage, there are some symptoms that distinguish ulcerative necrotic gingivitis from generalized periodontitis: the patient's overall health deteriorates, intoxication symptoms appear, and pain syndrome is severe in both conditions. These two conditions are linked to bad breath, painful gums when touched, loss of the normal gum shape, swelling and redness at the gum line, and poor oral hygiene (many soft plaques and hard tartar). Sharp hemorrhage followed by suppuration upon palpation as well as trauma to the gingival margin. Ulcerative necrotic gingivitis is characterized by flattened gingival papillae and necrotic plaques on the gums. Significant bleeding is a consequence of plaque removal and is exceedingly excruciating.

Acute periodontitis is characterized by the presence of pus-filled pockets, probable abscesses, gumline smoothing, swelling, pulse upon palpation, and possible fistula development. In areas of active inflammation, X-rays demonstrate mixed bone resorption with vertical resorption and cavity formation. The severity of periodontitis is directly proportional to the profundity of bone pockets. It is important to note that ulcerative necrotic gingivitis does not exhibit any changes in the bone structure on radiography. The identification of specific clinical features is necessary to differentiate chronic (catarrhal and hypertrophic) gingivitis from mild chronic generalized periodontitis. Abnormal periodontal indices, swollen and red gums, soft and firm plaque accumulation, and bleeding gums were common symptoms in both conditions. The Schiller-Pisarev test result was positive in both instances. Subsequently, periodontitis results in bone resorption of the interalveolar septum by up to one-third of its length, as well as periodontal fissures as deep as 4 mm. Polarography and rheoparodontography are not beneficial functional examination methods for differential diagnoses. Localized hypertrophic gingivitis and epulis share several characteristics, including the presence of localized gum overgrowth around 1-2 teeth. In contrast, Epulis exhibits a unique leaf or mushroom shape with a reddish-brown or bluish color. Bone changes such as thinning at the base of the epulis were also observed. Periodontal involvement near the causative tooth is frequently observed in the epulis.

Periodontitis is an autonomous disease that is associated with periodontal disease. It is characterized by inflammatory and destructive processes that affect the periodontal tissues. To distinguish between acute and worsened chronic periodontitis, common signs such as feeling unwell, tooth pain (especially when chewing or clenching your jaw), swelling and redness in the gums, and often an abscess should be considered. The main difference is that acute cases usually have single abscesses that appear in different spots for approximately 5-7 days. The primary distinguishing factor is the periodic occurrence of single abscesses at various locations for a period of 5-7 days. Radiographs indicate that alveolar processes are characterized by predominant vertical bone pocket resorption, and these abscesses are situated at the attached gum, unconnected to periodontal pockets, and frequently discharged through fistulas. Chronic periodontitis can be difficult to diagnose because of overlapping symptoms with other conditions.

Determining the differences between chronic periodontitis and other conditions

Inflammation Complicates Periodontosis: Both conditions exhibit symptoms such as gingival redness and swelling, periodontal pockets, plaque and tartar accumulation, and tooth mobility. However, in periodontosis worsened by inflammation, X-rays show gums pulling back without cavities and V-shaped gaps in the bone, with areas of both high and low bone density.

Desmodontosis: This condition is characterized by tooth displacement, spaces between teeth, loosening of periodontal pockets, and vertical bone loss, similar to chronic localized periodontitis.

Desmodontosis, characterized by symmetrical gum inflammation that primarily affects the front incisors and molars, does not have an obvious local cause. The signs of eosinophilic granuloma are similar to those of chronic generalized periodontitis, including bleeding gums, molar and premolar movements, and periodontal pockets. However, eosinophilic granulomas do not have a specific cause, grow rapidly in about 1.5 to 2 months, and show unique oval or round patterns of bone loss on X-rays near the jaw angle, ascending branch, or roots of teeth. The severity of periodontitis is determined by the degree of tooth mobility and extent of alveolar bone loss.

Comparing Involutional Changes with Periodontosis: Both conditions are characterized by bone loss, tooth mobility, and receding gum. Nevertheless, gum recession and tooth mobility are common and can vary in severity during natural aging. In addition, the jawbone does not exhibit any indications of generalized or localized bone thinning (osteoporosis) on radiography, and tooth wear is evident. The objective of this paraphrased version is to emphasize the key distinguishing features of each condition and shed light on the diagnostic challenges of overlapping symptoms. It is imperative to incorporate systemic factors, including blood disorders and infectious diseases, such as tuberculosis and syphilis, in addition to oral health, when diagnosing periodontal diseases. Although improvements in diagnostic tools, particularly functional methods, have significantly improved our understanding of periodontal pathology, these methods frequently lack the specificity necessary to distinguish distinct strains of the disease. Understanding the complex relationship between factors that lead to periodontal disease, such as oral hygiene, gum inflammation, blood vessel health, and changes in bone, is restricted by numerical measures often used in periodontology. The administrative functions of these indices are primarily associated with insurance claims. Additionally, the requirement for histological confirmation increases the difficulty of diagnosing tumorlike conditions in periodontal tissues. Special laboratories are required to collect and analyze tissue samples, which presents logistical challenges for individual dental practices.

Conclusion. The study concludes that the differential diagnosis of tumor-like periodontal disorders necessitates a comprehensive approach encompassing clinical evaluation, histological

analysis, and assessment of immunological responses, and that conventional diagnostic methods are inadequate for tumors and tumor-like diseases that affect the buccal cavity and periodontium.

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