

03

Otorrinolaringología





Dr. Francisco Torres Lear

La trayectoria del Dr. Torres Lear es la historia de un descubrimiento vocacional inesperado. Aunque se licenció en Medicina con la firme intención de ser cardiólogo, el destino intervino mientras preparaba el MIR: aprobó el acceso a Odontología y lo que comenzó como un paso intermedio se transformó en su verdadera pasión. En la estomatología descubrió un “trabajo artesano de la salud” que le cautivó por completo, haciéndole comprender que había nacido para esta profesión.

Su enfoque va más allá de lo clínico; su mayor satisfacción reside en mejorar la autoestima, el bienestar y la calidad de vida de sus pacientes. Defensor acérrimo de la prevención y la higiene diaria, el Dr. Torres lidera el Centro Dental Torres bajo una premisa clara: para conseguir la felicidad del paciente, primero hay que cuidar a las personas que trabajan en la clínica, dotándolas de los mejores medios en una organización sólida y humana.

Titulación

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Quince artículos en revistas científicas
Cuatro proyectos de investigación en distintos temas de la especialidad

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Referencias
científicas



Referencias científicas

Abe M, Mitani A, Yao A, Takeshima H, Zong L, Hoshi K, Yanagimoto S. Close Associations of Gum Bleeding with Systemic Diseases in Late Adolescence. *Int J Environ Res Public Health*. 2020 Jun 16;17(12):4290. doi: 10.3390/ijerph17124290. PMID: 32560147; PMCID: PMC7345092. <https://pubmed.ncbi.nlm.nih.gov/32560147/>

ABSTRACT

Background: Though it is well known that periodontal diseases are associated with various systemic diseases in adults, the associations in late adolescents have not been adequately elucidated. We investigated the association between gum bleeding (a major symptom of periodontal diseases) and common systemic diseases in late adolescents: allergic, respiratory, and otorhinolaryngologic diseases.

Methods: We conducted a retrospective review of the mandatory medical questionnaires administered as a part of legally required freshman medical checkup between April 2017 and April 2019 at the University of Tokyo. Among the total of 9376 sets of responses, 9098 sets from students aged less than 20 were analyzed. An χ^2 test and univariate and multivariate binomial logistic regression analyses were performed using SAS ver. 9.4. A value of $p < 0.05$ was accepted as significant.

Results: According to the questionnaire data, 3321 students (36.5%; 2780 males and 541 females) responded that they experienced gum bleeding whenever they brushed their teeth. These students had significantly higher incidence rates of otitis media/externa and asthma/cough-variant asthma ($p = 0.001$ and $p = 0.006$, respectively). The results of the multivariate analysis showed significant rates of the following complications among these students: (1) otitis media/externa (odds ratio (OR) 1.691; 95% confidence interval (CI): 1.193-2.396; $p = 0.003$), (2) asthma/cough-variant asthma (OR 1.303; 95% CI: 1.091-1.556; $p = 0.003$), and (3) male gender (OR 1.536; 95% CI: 1.337-1.765; $p < 0.001$).

Conclusions: Gum bleeding was closely associated with otitis media/externa and asthma in late adolescents. Our study reinforces new evidence about the association between periodontal diseases and asthma, and it reveals a novel and close association between gum bleeding and otitis media/externa.

Abe M, Mitani A, Yao A, Zong L, Hoshi K, Yanagimoto S. Awareness of Malocclusion Is Closely Associated with Allergic Rhinitis, Asthma, and Arrhythmia in Late Adolescents. *Healthcare (Basel)*. 2020 Jul 12;8(3):209. doi: 10.3390/healthcare8030209. PMID: 32664631; PMCID: PMC7551248. <https://pubmed.ncbi.nlm.nih.gov/32664631/>

ABSTRACT

Background: Oral infectious diseases are typified by dental caries and periodontal diseases and are known to be associated with various systemic diseases. However, clear associations between occlusal disorders and systemic diseases have not yet been established. We investigated the association between an awareness of malocclusion and common diseases in late adolescence.

Methods: We retrospectively reviewed the data of mandatory medical questionnaires that are a legal

requirement of the freshman medical checkup. We collected the data of all the students who completed the questionnaires between April 2017 and 2019. The data were analyzed using the χ^2 test and multivariate analysis was performed with a binomial logistic regression model.

Results: The subjects were 9098 students aged 17-19 (mean age 18.3 years). The rate of awareness of malocclusion was 2.14% (195 out of 9098 eligible subjects; 160 males and 35 females). These students had significantly greater rates of allergic rhinitis, asthma, and arrhythmia ($p < 0.001$). Multivariate analysis revealed significant rates of allergic rhinitis (odds ratio [OR] 2.184, 95% confidence interval [CI]: 1.468-3.250, $p < 0.001$), asthma (OR 1.843, 95%CI: 1.153-2.945, $p = 0.011$), and arrhythmia (OR 2.809, 95%CI: 1.083-7.288, $p = 0.034$) among students with an awareness of malocclusion.

Conclusion: We identified close associations between an awareness of malocclusion and systemic diseases including allergic rhinitis, asthma, and arrhythmia in the late adolescent population. These results reinforce the associations between malocclusion and allergic rhinitis and asthma, as well as providing novel insight into the association of malocclusion and arrhythmia. However, further research is necessary to confirm the associations and explore the mechanisms underlying these associations.

Abou-Bakr A, Ahmed E, William H, Hassanein FEA. Frequency of periodontal disease in head and neck cancer patients after radiation therapy: a cross-sectional study. *BMC Oral Health*. 2025 Jul 2;25(1):1008. doi: 10.1186/s12903-025-06391-7. PMID: 40604898; PMCID: PMC12225212. <https://pubmed.ncbi.nlm.nih.gov/40604898/>

ABSTRACT

Background: Patients with head and neck cancer (HNC) receiving radiation therapy (RT) have complications affecting both general and dental health. While RT is effective against HNC, it negatively impacts oral tissues, including changes in periodontal attachment. This study aimed to evaluate the frequency of periodontal disease among HNC patients after RT in a sample of the Egyptian population, as well as to assess the associated risk factors.

Materials and methods: A prospective cross-sectional study was conducted on 189 HNC patients attending a radiation center in Cairo, Egypt. Eligible patients underwent a full periodontal examination including plaque index (PI), bleeding on probing (BOP), clinical attachment level (CAL), and probing pocket depth (PPD). Subsequently, Clinical Oral Dryness Score (CODS), salivary flow rate and body mass index (BMI) were assessed to examine associations with periodontal health.

Results: Periodontal disease was diagnosed in 183 (96.8%) HNC patients. Among them, 174 (95.08%) cases were diagnosed as periodontitis and 9 (4.9%) as gingivitis. The distribution of periodontitis different stages was as follows: Stage I was found in 21 (12.07%) cases, Stage II in 30 (17.24%), Stage III in 55 (31.61%), and Stage IV in 68 (39.08%). The correlation between the number of RT fractions and periodontal disease severity was not statistically significant ($p = 0.837$). However, there was a strong negative correlation between periodontitis stage and both body mass index (BMI) and salivary flow rate. In contrast, strong positive correlations were observed between periodontitis severity and RT dose, plaque percentage, and Clinical Oral Dryness Score (CODS).

Conclusions: The frequency of periodontitis in the studied sample of HNC patients post RT was 95.08%,



reflecting a notably high burden. The most prevalent periodontitis stage was the severe form (Stage IV). Higher periodontitis severity was found to be positively associated with RT dose, plaque percentage, and CODS, suggesting factors to plan future investigation on preventive care in HNC patients. While causality cannot be inferred due to the study design, these findings could be useful in developing more effective clinical management strategies in future research.

Alrmali AE, Wang HL. Dental Pathophysiology of Odontogenic Sinusitis: Oral Surgical Complications. *Otolaryngol Clin North Am.* 2024 Dec;57(6):977-989. doi: 10.1016/j.otc.2024.07.006. Epub 2024 Aug 17. PMID: 39155170. <https://pubmed.ncbi.nlm.nih.gov/39155170/>

ABSTRACT

The article explores the understudied pathophysiology of odontogenic sinusitis (ODS) development as a result of oral surgical complications such as oroantral communication (OAC) or fistula (OAF), maxillary sinus bone grafting, and dental implantation. A temporary OAC presents most often after dental extraction, especially with posterior maxillary teeth, though can happen with any oral surgical intervention. Maxillary sinus augmentation can also cause ODS, and while the pathophysiology is incompletely understood, it may be related to OAC/OAF formation or bone graft infection. Dental implants may also lead to ODS either via displacement into the sinus, partial protrusion into the sinus, or peri-implantitis.

AlRowis RM, Alzahrani AH, Alzuhair SH, Almalhook KA, Almasry AW, Hamdan HM. Assess the Association Between Periodontitis and Maxillary Sinusitis: A Cross-Sectional Cone-Beam Computerized Tomography (CBCT) Study. *Cureus.* 2023 Nov 9;15(11):e48587. doi: 10.7759/cureus.48587. PMID: 38084169; PMCID: PMC10710533. <https://pubmed.ncbi.nlm.nih.gov/38084169/>

ABSTRACT

Background/purpose Periodontal pathologies which are considered odontogenic in origin can be a major cause of maxillary sinusitis, along with other dental and non-dental causes. The aim of this study is to define and assess the relationship between periodontitis and maxillary sinusitis. **Material and methods** A total of 415 CBCT datasets of periodontitis patients were cross-sectionally evaluated. Alveolar bone loss and maxillary sinus mucosal thickening were measured in coronal and sagittal sections, these two variables represent the severity of periodontitis and maxillary sinusitis, respectively. **Results** This study found that mucosal thickening was significantly higher in patients with increased alveolar bone loss severity ($P=0.03$). Mucosal thickening was significantly higher among males (83.5%) than among females (69.8%) ($P=0.001$). moderate or severe alveolar bone loss had a significantly higher risk of mucosal thickening with an odds ratio of 1.8 when compared to those with mild alveolar bone loss (95% CI: 1.04-3.2). Males had an increased risk of mucosal thickening compared to females with an odds ratio of 2.2 (95% C.I.: 1.4-3.6). **Conclusion** In conclusion, periodontal structure can affect maxillary sinus and its health. Therefore, after confirming a diagnosis of maxillary sinusitis, a detailed examination of periodontal health is needed. These results can be used to increase the awareness of dental students and practitioners in clinical and diagnostic judgement.

Arango Jimenez N, Morales Vera DZ, Latorre Uriza C, Velosa-Porras J, Téllez Corral MA, Escobar Arregocés FM. Relationship of obstructive sleep apnea with periodontal

condition and its local and systemic risk factors. *Clin Oral Investig.* 2023 Jun;27(6):2823-2832. doi: 10.1007/s00784-023-04869-8. Epub 2023 Feb 17. PMID: 36800028; PMCID: PMC10264262. <https://pubmed.ncbi.nlm.nih.gov/36800028/>

ABSTRACT

Objective: Obstructive sleep apnea (OSA) and periodontitis share risk factors, such as age, obesity, stress, and cardiovascular events, which have a bidirectional cause-effect relationship through systemic inflammation. Our objective was to determine the relationship between OSA and the periodontal condition and its associated local and systemic risk factors.

Material and methods: This was an observational case-control study involving 60 patients. Local oral risk factors and the systemic condition of each patient were evaluated. All patients underwent polysomnography for the diagnosis of OSA. Chi-squared, one-way ANOVA, and Bonferroni's tests were performed.

Results: A higher percentage of patients with periodontitis had severe OSA (66.66%); however, no statistically significant association was found between the two pathologies ($p = 0.290$). In terms of systemic risk factors, an association was found between arterial hypertension and severe OSA ($p = 0.038$), and in terms of local factors, an association was found between the use of removable prostheses and severe OSA ($p = 0.0273$).

Conclusion: In the general population, patients with periodontitis showed a higher prevalence of severe OSA. Obesity and hypothyroidism were the most prevalent systemic findings in patients with OSA and periodontitis. Arterial hypertension and osteoarthritis were found to be associated with severe OSA. The local risk factors associated with periodontitis and severe OSA were removable partial dentures and misfit resins.

Clinical relevance: To study the factors that can facilitate the progression of OSA and periodontitis, physicians and dentists should be advised to provide comprehensive care for patients with both pathologies.

Bianchi E, Segù M, Toffoli A, Razzini G, Macaluso GM, Manfredi E. Relationship between periodontal disease and obstructive sleep apnea in adults: A systematic review. *Dent Res J (Isfahan).* 2024 Feb 22;21:15. PMID: 38476714; PMCID: PMC10929726. <https://pubmed.ncbi.nlm.nih.gov/38476714/>

ABSTRACT

The purpose of this systematic review was to evaluate whether there are scientific evidence regarding the association between periodontitis and obstructive sleep apnea (OSA) in adults. An electronic search was performed on MEDLINE/PubMed for prospective and retrospective longitudinal studies, cohort studies, and case-control studies conducted in human adults affected by both OSA and periodontitis. Two reviewers extracted the data using a custom Excel spreadsheet. A methodological assessment of the quality of the studies was performed using the Newcastle-Ottawa Scale. Fourteen studies were included. All studies evaluated the association between periodontitis and OSA. None of the studies evaluated the cause-effect relationship. Eleven studies found a significant positive relationship between periodontitis and OSA, whereas three found no statistically significant association. Several study limitations were observed, such as lack of standardization of study groups, diagnosis of periodontitis and OSA, and differences in



study design. Evidence of a plausible association between periodontitis and OSA was found. The possible relationship could be explained by systemic inflammation, oral breathing, and the comorbid relationship attributable to common risk factors. Observational and randomized controlled studies are needed to clarify the mechanism of interaction between the two conditions.

Brandt E, Kaman W, Bikker F, Räisänen IT, Mäkitie A, Keskin M, Karaçetin D, Hagström J, Rautava J, Sorsa T. aMMP-8 and MMP-9: Potential Biomarkers for periodontitis Progression in Patients Receiving Radiotherapy for Head and Neck Carcinoma. *Cancer Control*. 2025 Jan-Dec;32:10732748251351419. doi: 10.1177/10732748251351419. Epub 2025 Jun 22. PMID: 40545647; PMCID: PMC12183397. <https://pubmed.ncbi.nlm.nih.gov/40545647/>

ABSTRACT

IntroductionMatrix metalloproteinases (MMP)-8 and -9 are regarded as biomarkers for periodontitis. The impact of head and neck carcinoma (HNC) radiotherapy (RT) on these biomarkers remains largely unexplored. This study aims to evaluate the impact of HNC RT on the proteases from host and bacteria, and their associations with the progression of periodontitis.
MethodsTwenty-one patients with HNC receiving RT were included in this study. Mouthrinse samples were collected before RT (T0) and at the end of RT (T1). Periodontal examinations were conducted at T0 and one month after RT (T2). Samples were analyzed using a point-of-care kit for active (a) MMP-8, and ELISA for total (t) MMP-8, MMP-9, and interleukin (IL)-6 levels. Molecular forms of MMP-9 were assessed by gelatinolytic zymography. The activity levels of bacterial proteases, gingipain from *Porphyromonas gingivalis* and dentilisin from *Treponema denticola*, were assayed by using Fluorescence Resonance Energy Transfer (FRET) peptide substrates. Modified cumulative risk score (CRS) index was used for combinatory biomarker analysis. We evaluated the impact of RT on biomarker concentrations as well as their associations with the mean clinical attachment loss (CAL) development, categorized as either progressive (CAL ≥ 0.1 mm) or low/no progression (CAL < 0.1 mm).
ResultsAll patients suffered from periodontitis. There were significant increases in the levels of aMMP-8, tMMP-8, aMMP-9, as well as in four modified CRS-indices due to RT ($P < 0.05$), but no impact on the activities of gingipain ($P = 0.365$) or dentilisin ($P = 0.620$). The mean levels of aMMP-8 and tMMP-9 were associated with CAL progression ($P = 0.044$, $P = 0.029$, respectively).
ConclusionHNC RT may result in the progression of periodontitis by increased activities of MMP-8 and -9. It seems that HNC RT has little impact on the activities of the bacteria-derived proteases dentilisin and gingipain.

Byun SH, Min C, Park IS, Kim H, Kim SK, Park BJ, Choi HG, Hong SJ. Increased Risk of Chronic Periodontitis in Chronic Rhinosinusitis Patients: A Longitudinal Follow-Up Study Using a National Health-Screening Cohort. *J Clin Med*. 2020 Apr 19;9(4):1170. doi: 10.3390/jcm9041170. PMID: 32325855; PMCID: PMC7231281. <https://pubmed.ncbi.nlm.nih.gov/32325855/>

ABSTRACT

This study compared the risk of chronic periodontitis (CP) between chronic rhinosinusitis (CRS) and non-chronic rhinosinusitis (control) patients using a national cohort dataset from the Korean Health Insurance Review and Assessment Service. CRS ($n = 5951$) and control participants ($n = 23,804$) were selected after 1:4 ratio matching for age, sex, income, region of residence, and preoperative CP visits. Postoperative CP visits were measured between 2002 and 2015. The margin of equivalence of the difference between the

CRS and control groups was set between -0.5 and 0.5. Statistical significance was noted in the post-index date (ID) of the third, fourth, and fifth year periods. In subgroup analyses according to age and sex, statistical significance was observed in 40-59-year-old males in post-ID third, fourth, and fifth year periods, ≥ 60 -year-old males in post-ID third and fourth year periods, and ≥ 60 -year-old females in post-ID fifth year period ($p < 0.05$, each). In another subgroup analysis based on the number of pre-ID CP visits, statistical significance was observed for pre-ID CP (0 time) in the third, fourth, and fifth year periods ($p < 0.05$, each). This study revealed that CRS participants were likely to receive CP diagnosis and treatment.

Carr E, Aslam-Pervez B. Does the use of alcohol mouthwash increase the risk of developing oral cancer? *Evid Based Dent*. 2022 Mar;23(1):28-29. doi: 10.1038/s41432-022-0236-0. Epub 2022 Mar 25. PMID: 35338325. <https://pubmed.ncbi.nlm.nih.gov/35338325/>

ABSTRACT

Design Systematic review.
Case selection This study had a focused research format in terms of PICO (Population, Intervention, Comparison, Outcomes). There were no age, gender or medical conditions which restricted or excluded patients from the inclusion criteria. The intervention was the use of alcohol-based mouthwashes in comparison to the control group where no mouthwash was used. A literature search was carried out utilising three electronic databases including PubMed, Scopus and Cochrane Library. The papers included for analysis within this review were all published from 2006 onwards and animal studies, case series and case reports were excluded.
Data analysis The qualitative analysis included 43,499 participants from eight papers which included two meta-analyses, one clinical trial, three case-control studies and two cohort studies, all of which fulfilled the inclusion criteria. Data were analysed by two independent reviewers who initially screened the articles and removed duplications before a second round of in-depth evaluation was conducted. A third reviewer was also included to act impartially to resolve any disagreements and reduce bias within the study. Risk of bias within studies was assessed utilising the Newcastle-Ottawa Scale (NOS) which provided a uniform approach between the reviewers. A score of 6 or greater was associated with a low level of bias.
Results The primary outcome parameter measured was acetaldehyde levels in saliva and the secondary outcome factor was the risk of developing an oral cancer. The results from this review concluded that the relationship between the use of alcohol mouthwash and cancer risk is complex and influenced by multiple variables. Factors which may influence the risk of developing an oral cancer from the use of alcohol mouthwash include increased frequency of rinsing (more than three times daily), total duration of mouthwash use (> 35 years), poor oral hygiene and presence of other risk factors (for example, smoking and alcohol intake).
Conclusions The use of alcohol-containing mouthwashes alone (when no other risk factors are present) does not increase the risk of developing an oral cancer or lead to increased salivary acetaldehyde. However, where other risk factors for oral cancer are present, the use of an alcohol-based mouthwash may further increase this risk.

Chiapasco M, Tommasato G. Management of Oral Surgery-Related Complications. *Otolaryngol Clin North Am*. 2024 Dec;57(6):1139-1155. doi: 10.1016/j.otc.2024.07.007. Epub 2024 Aug 30. PMID: 39214737. <https://pubmed.ncbi.nlm.nih.gov/39214737/>



ABSTRACT

This article reviews the optimal management of oroantral fistulas, implants protruding into the maxillary sinus, implants completely displaced into the sinus(es), and infected bone grafts used for sinus augmentation. For each scenario, multidisciplinary management strategies will be considered based on whether there is concurrent infectious odontogenic sinusitis. A multidisciplinary approach with oral surgeons and otolaryngologists is often mandatory to ensure optimal therapeutic outcomes.

Craig JR. Odontogenic sinusitis: A state-of-the-art review. *World J Otorhinolaryngol Head Neck Surg.* 2022 Mar 22;8(1):8-15. doi: 10.1002/wjo2.9. PMID: 35619928; PMCID: PMC9126162. <https://pubmed.ncbi.nlm.nih.gov/35619928/>

ABSTRACT

Odontogenic sinusitis (ODS) is more common than historically reported, and is underrepresented in the sinusitis literature. ODS is distinct from rhinosinusitis in that it is infectious sinusitis from an infectious dental source or a complication from dental procedures, and most commonly presents unilaterally. ODS clinical features, microbiology, and diagnostic and treatment paradigms are also distinct from rhinosinusitis. ODS evaluation and management should generally be conducted by both otolaryngologists and dental providers, and clinicians must be able to suspect and confirm the condition. ODS suspicion is driven by certain clinical features like unilateral maxillary sinus opacification on computed tomography, overt maxillary dental pathology on computed tomography, unilateral middle meatal purulence on nasal endoscopy, foul smell, and odontogenic bacteria in sinus cultures. Otolaryngologists should confirm the sinusitis through nasal endoscopy by assessing for middle meatal purulence, edema, or polyps. Dental providers should confirm dental pathology through appropriate examinations and imaging. Once ODS is confirmed, a multidisciplinary shared decision-making process should ensue to discuss risks and benefits of the timing and different types of dental and sinus surgical interventions. Oral antibiotics are generally ineffective at resolving ODS, especially when there is treatable dental pathology. When both the dental pathology and sinusitis are addressed, resolution can be expected in 90%-100% of cases. For treatable dental pathology, while primary dental treatment may resolve the sinusitis, a significant percentage of patients still require endoscopic sinus surgery. For patients with significant sinusitis symptom burdens, primary endoscopic sinus surgery is an option to resolve symptoms faster, followed by appropriate dental management. More well-designed studies are necessary across all areas of ODS.

Craig JR, Dai X, Bellemore S, Woodcroft KJ, Wilson C, Keller C, Bobbitt KR, Ramesh M. Inflammatory endotype of odontogenic sinusitis. *Int Forum Allergy Rhinol.* 2023 Jun;13(6):998-1006. doi: 10.1002/alr.23099. Epub 2022 Nov 8. PMID: 36308740. <https://pubmed.ncbi.nlm.nih.gov/36308740/>

ABSTRACT

Background: Odontogenic sinusitis (ODS) is distinct from non-odontogenic rhinosinusitis with regard to clinical features as well as diagnostic and therapeutic approaches. While numerous studies have explored immune profiles of chronic rhinosinusitis, very few studies have explored the inflammatory endotype of ODS.

Methods: Odontogenic sinusitis was diagnosed by confirming infectious sinusitis adjacent to infectious maxillary odontogenic pathology. Maxillary sinus cultures and mucosal biopsies were obtained during endoscopic endonasal surgery in ODS and control patients. Controls were patients undergoing endoscopic skull base surgery with no sinus disease. Specimens were snap frozen in liquid nitrogen and stored at -80°C. Analysis was performed using a multiplex assay to measure Th-1 (TNF α , IFN γ , IL-2,12,18), Th-2 (IL-4,5,9,13), Th-17 (IL-17A,17F,22), and innate (CCL5,CXCL9,CXCL10, IL-6,8,10,12,23,27) immune pathways. Groups were compared via independent sample t-tests; if assumptions were violated, nonparametric Wilcoxon ranked sum tests were performed.

Results: Specimens from 22 ODS patients were compared to nine controls. ODS mucosal tissue was sampled in the setting of the following dental pathologies: post-dental extraction (n = 15), untreated apical periodontitis (n = 2), apical periodontitis after root canal therapy (n = 2), and maxillary sinus bone grafting with or without dental implantation (n = 3). The following cytokines were significantly elevated in ODS compared to controls: IFN γ , TNF α , IL-6, 8, 10, 27, and CXCL9. IL-17 levels were similar in both ODS and controls. Therefore, ODS demonstrated heightened innate and Th1 immune activity.

Conclusion: ODS demonstrated both innate immune and Th1 inflammatory endotypes. Further studies are needed to explore ODS immunopathobiology and its potential impact on ODS management.

Craig JR, Saibene AM, Felisati G. Sinusitis Management in Odontogenic Sinusitis. *Otolaryngol Clin North Am.* 2024 Dec;57(6):1157-1171. doi: 10.1016/j.otc.2024.06.012. PMID: 39428206. <https://pubmed.ncbi.nlm.nih.gov/39428206/>

ABSTRACT

For odontogenic sinusitis (ODS), appropriately treating the infectious dental pathology and sinusitis leads to disease resolution in greater than 90% of cases. Importantly, managing the sinusitis of ODS is distinct from non-odontogenic rhinosinusitis. The main factors affecting ODS management decision-making include whether patients present with complicated ODS (extrasinus infectious spread), whether they have treatable dental pathology, and whether they have high dental versus sinusitis symptom burdens. This article will provide an evidence-based approach to the multidisciplinary management necessary to manage the purulent sinusitis characteristic of ODS.

Douglas JE, Patel T, Rullan-Oliver B, Ungerer H, Hinh L, Peterson EL, Kohanski MA, Kennedy DW, Palmer JN, Adappa ND, Craig JR. Odontogenic Sinusitis is a Common Cause of Operative Extra-Sinus Infectious Complications. *Am J Rhinol Allergy.* 2022 Nov;36(6):808-815. doi: 10.1177/19458924221114941. Epub 2022 Jul 25. PMID: 35876310. <https://pubmed.ncbi.nlm.nih.gov/35876310/>

ABSTRACT

Background: Orbital, intracranial, and osseous extra-sinus complications can arise from bacterial or fungal sinusitis. Odontogenic sinusitis (ODS) can cause extra-sinus complications, but its prevalence remains poorly characterized.

Objective: To determine the frequency of ODS as a cause of operative extra-sinus infectious complica-



tions and describe clinical features of all complicated sinusitis cases.

Methods: A multi-institutional retrospective review was performed on all operative sinusitis-related extra-sinus complications from 2011 to 2020. ODS was diagnosed by sinus computed tomography (CT) and dental evaluations when available. Demographics, complication types, sinusitis etiologies, and various clinical features were analyzed.

Results: Forty-five patients were included (mean age 55.5 years, 56% male). Of the extra-sinus complications, 40% were orbital only, 22% intracranial only, 13% osseous only, and 25% involved combined complications. The 2 most common causes of extra-sinus complications were ODS (40%) and mucopyocele (27%). When invasive fungal etiologies were excluded, and only unilateral maxillary opacification on CT was considered, nearly 60% of extra-sinus complications were due to ODS. Unilateral maxillary sinus opacification on CT was present in 100% of complicated ODS compared to 44% of nonodontogenic cases, and oral anaerobes were only identified in ODS cases. No complicated ODS patients underwent dental interventions during hospitalization.

Conclusion: ODS was the most common cause of operative extra-sinus infectious complications. Clinicians should consider ODS high on the differential diagnosis of all patients presenting with complicated sinusitis, especially when sinusitis is unilateral and invasive fungal infection is not suspected.

Florian-Tirado WL, Asmat-Abanto AS, Ulloa-Cueva DM, Del Castillo-Huertas OM. Periodontitis associated with risk of obstructive sleep apnea in Peruvian adult patients: A cross-sectional study. *Med Oral Patol Oral Cir Bucal*. 2024 Sep 1;29(5):e606-e612. doi: 10.4317/medoral.26561. PMID: 38794941; PMCID: PMC11365060. <https://pubmed.ncbi.nlm.nih.gov/38794941/>

ABSTRACT

Background: Patients at high risk for obstructive sleep apnea (OSA) are characterized by intermittent transient hypoxias and upper respiratory tract collapse, with reactive oxygen production and oxidative imbalance which causes an inflammatory cascade. This can generate negative effects on the periodontium, causing severe tooth attachment loss. This study aimed to determine the association between periodontitis and the risk of OSA in adults who attend outpatient otolaryngology consultations.

Material and methods: A cross-sectional observational study was carried out with 118 patients seen in the otolaryngology service of the Hospital Victor Lazarte Echegaray-ESSALUD in Trujillo (Peru), between September and October 2023. The presence and severity of periodontitis were determined using the Page and Eke criteria, and the presence and severity of OSA risk were determined using the STOP-BANG questionnaire. The results were analyzed using Chi-square, Spearman correlation and logistic regression tests, considering a significance level of $p < 0.05$.

Results: An association was found between periodontitis and risk of OSA ($p = 0.000$), obtaining a positive relationship with $rs = 0.527$. In addition, there was an association between periodontitis and DM2 ($p = 0.028$) and bronchial asthma (0.017). No association was found between periodontitis and sex (0.503) or age (0.741).

Conclusions: There is an association between periodontitis and the risk of OSA in Peruvian adult pa-

tients who attended outpatient otolaryngology consultations. This association was also found according to age, sex, smoking, DM2 and asthma. In addition, an association was found between periodontitis and DM2 and asthma, but not with sex and age.

Gufran K, Alsakr AM, Alqahtani AS, Alqhtani NR, Alasmari D, Alzamil FF, Alotaibi NM, Alhamid HM, Aldafiri AS. Association between Periodontitis and Chronic Rhinosinusitis Involving Maxillary Sinus Measured by Lund Mackay Staging System. *Healthcare (Basel)*. 2022 Oct 7;10(10):1961. doi: 10.3390/healthcare10101961. PMID: 36292408; PMCID: PMC9602182. <https://pubmed.ncbi.nlm.nih.gov/36292408/>

ABSTRACT

This study aimed to evaluate the association between periodontitis and chronic rhinosinusitis (CRS) via cone-beam-computed tomography (CBCT) using the Lund-Mackay staging system. CBCT images from different departments of the school of dentistry, at Prince Sattam University were evaluated for the presence of rhinosinusitis. All the CBCT scans were exposed for multiple indications, and no patients had a scan exposed solely for this study. The Lund-Mackay staging system was used to measure the CRS in the CBCT. Descriptive statistics for the frequencies and percentages were used to summarize the data. Logistic regression was used to examine the associations between periodontitis and CRS. Each variable was assessed individually by using multivariable analysis. Collinearity issues among the variables were solved to select a limited set of factors using a stepwise variable selection procedure. A total of 399 CBCT images were included in the current research. Logistic regression showed that only gender was significantly associated ($p = 0.0001$) with the presence of CRS. However, a stepwise variable selection procedure included gender and bone loss as significantly associated with CRS. No significant difference was observed between unilateral vs. bilateral CRS in gender, bone loss, medical status, and periodontitis. However, only gender showed a significant difference in both bilateral vs. no CRS and unilateral vs. no CRS. Periodontitis is not associated with CRS. However, gender has a significant influence on CRS.

Hotta Y, Ito K, Komatsu S, Saito T, Teramoto Y, Hotta H. A Case of Simultaneous Sinus Augmentation and Oroantral Fistula Closure for Implant Preparation. *J Oral Implantol*. 2024 Dec 1;50(6):589-594. doi: 10.1563/aid-joi-D-24-00116. PMID: 39360465. <https://pubmed.ncbi.nlm.nih.gov/39360465/>

ABSTRACT

An oroantral communication may form in the upper molar region after tooth extraction. The patient is a 59-year-old female, who is a nonsmoker. At the initial visit, teeth #14, #15, and #17 were missing. After tooth #16 was extracted due to apical periodontitis, a bone defect with a diameter of approximately 4 mm was observed, leading to the formation of an oroantral fistula (OAF). Another window was created in the lateral wall adjacent to the superior part of the bone defect at the fistula site to achieve closure of the OAF through bone formation and simultaneously perform sinus floor elevation (lateral approach) for implant placement. Through this lateral window, instruments were inserted into the maxillary sinus towards the bone defect at the fistula site. During this process, the remaining bone between the lateral window and the bone defect at the fistula site was carefully removed with instruments, connecting the two bone defects to facilitate manipulation of the instruments. The Schneiderian membrane was elevated without enlarging the tear. Six months after these surgeries, a cone beam computerized tomography (CBCT) scan confirmed



the closure of the fistula with hard tissue and the elevation of the sinus floor. Subsequently, three implants were placed, and prosthetic treatment was completed. Follow-up data is provided, including periapical X-ray and CBCT images taken 2 years and 3 months after surgery (1 year and 3 months after the placement of the final prosthetic structure). The progress so far has been favorable.

Kabak SL, Melnichenko YM, Anishchenko SL, Savrasova NA, Pavlov OM, Mekhtiev RS. Verkhnechelyustnoi sinusit kak oslozhenie dental'noi implantatsii: sluchai iz praktiki [Maxillary sinusitis as a complication of dental implants placement: a case report]. Vestn Otorinolaringol. 2024;89(1):42-44. Russian. doi: 10.17116/otorino20248901142. PMID: 38506025. <https://pubmed.ncbi.nlm.nih.gov/38506025/>

ABSTRACT

The article presents a case of chronic odontogenic maxillary sinusitis and the results of its surgical treatment. The cause of the sinusitis, confirmed by the results of X-ray and pathohistological studies, was an inflammatory process affecting the bone tissue around the implant, installed in the place of the upper first molar which was accompanied by the development of an oroantral fistula. During the surgical intervention, the communication between the oral cavity and the maxillary sinus was eliminated, and the implant with the abutment, which was entirely in its cavity, was also removed.

Kassim N, Sirajuddin S, Biswas S, Rafiuddin S, Apine A. Iatrogenic Damage to the Periodontium Caused by Radiation and Radiotherapy. Open Dent J. 2015 Jun 26;9:182-6. doi: 10.2174/1874210601509010182. PMID: 26312083; PMCID: PMC4541411. <https://pubmed.ncbi.nlm.nih.gov/26312083/>

ABSTRACT

The radio-sensitivity of a tissue or organ is measured by its response to irradiation. Loss of moderate numbers of cells does not affect the function of most organs. However, with loss of large numbers of cells, all affected organisms display a clinical result. The severity of this change depends on the dosage and thus the extent of cell loss. Moderate doses to a localized area may lead to repairable damage. Comparable doses to a whole organism may result in death from damage to the most sensitive systems in the body.

Keller JJ, Wu CS, Lin HC. Chronic rhinosinusitis increased the risk of chronic periodontitis: a population-based matched-cohort study. Laryngoscope. 2013 Jun;123(6):1323-7. doi: 10.1002/lary.23720. Epub 2013 May 10. PMID: 23666605. <https://pubmed.ncbi.nlm.nih.gov/23666605/>

ABSTRACT

Objectives/hypothesis: Although chronic periodontitis (CP) and chronic rhinosinusitis (CRS) both share immunological disturbances as pathological factors, no prior study has investigated the risk for CP among patients with CRS. This study set out to provide an estimation of risk by utilizing a cohort study design to leverage the statistical power of a population-based dataset in Taiwan.

Study design: A retrospective cohort study.

Methods: In total, 13,782 CRS subjects were included in the study cohort and 41,346 subjects were randomly extracted for the comparison cohort. We individually tracked each subject in this study (N = 55,128) for a 5-year period following their index date to identify those subjects who received a subsequent diagnosis of CP. Cox proportional hazards regression analysis was conducted to calculate the 5-year risk of subsequent CP following a diagnosis of CRS among the sampled subjects.

Results: The incidence rate of CP during the 5-year follow-up period was 5.12 (95% confidence interval [CI], 4.95-5.30) per 100 person-years and 3.24 (95% CI, 3.17-3.30) per 100 person-years for the study and comparison cohort, respectively. Cox proportional hazards regression revealed that the hazard ratio for CP during the 5-year follow-up period for subjects with CRS was 1.59 times (95% CI, 1.52-1.67) that of comparison subjects after adjusting for monthly income, geographic region, hypertension, diabetes, coronary heart disease, and hyperlipidemia, and censoring for cases who died during the 5-year follow-up period.

Conclusions: This study detected an increased risk for CP among patients suffering from CRS. CRS patients should be alerted to pay particular attention to their oral hygiene practices to prevent both CP and its downstream sequelae.

Kheiri L, Amid R, Kadkhodazadeh M, Kheiri A. What are the outcomes of dental implant placement in sites with oroantral communication using different treatment approaches?: a systematic review. BMC Oral Health. 2025 Apr 29;25(1):652. doi: 10.1186/s12903-025-05958-8. PMID: 40301851; PMCID: PMC12039167. <https://pubmed.ncbi.nlm.nih.gov/40301851/>

ABSTRACT

Background: Oroantral fistula is a pathologic condition caused by various procedures including extraction, trauma and implant insertion. To date, various techniques have been suggested for oroantral fistula management. The aim of this review was to evaluate the outcomes of oroantral communication/fistula closure techniques followed by simultaneous or delayed implant placement.

Methods: Based on the search strategy, an electronic search for English-language clinical studies was performed in PubMed, Web of Science, Scopus and Google Scholar from January 2000 until December 2024. All studies with the focus on the outcomes of oroantral communication/fistula closure followed by simultaneous or delayed implant placement were included.

Results: Initial research led to 56 studies. Following removal of duplicates and irrelevant studies, full texts of 20 articles studies. Finally, 15 studies were included in the review. In 3 and 11 studies, implant placement was performed simultaneously or delayed, respectively and one reported both protocols. The largest and smallest diameter of fistula were 20 mm and 4 mm, in order. Different treatment protocols including bone grafting, buccal fat pad and collagen strip technique were performed in included studies. None of the studies mentioned undesirable effects during follow-ups.

Conclusion: All treatment modalities offered acceptable outcomes. However, because of heterogeneity of studies, no standard treatment protocol can yet be suggested. However, influential factors including



defect characteristics, patient's medical history and sinus health, location and accessibility must be considered prior to choose the best treatment approach.

Kim TG, WhangBo CH, Ye MK, Shin SH. Comparative analysis of clinical characteristics of odontogenic maxillary sinus diseases associated with or without dental implants. *Sci Rep.* 2025 Jul 1;15(1):20781. doi: 10.1038/s41598-025-07832-7. PMID: 40596631; PMCID: PMC12214852. <https://pubmed.ncbi.nlm.nih.gov/40596631/>

ABSTRACT

Unilateral maxillary sinusitis and maxillary fungal ball (FB) have diverse etiologies. Maxillary sinus diseases are predominantly associated with odontogenic origins. This study aimed to investigate and compare the clinical characteristics of odontogenic maxillary sinus diseases between implant-related and implant-non-related etiologies. This retrospective study enrolled 195 patients with odontogenic maxillary sinus diseases undergoing endoscopic sinus surgery. The patients were categorized into four groups: implant-related and -non-related odontogenic sinusitis and implant-related and -non-related odontogenic FB. The study analyzed sinonasal symptoms, SNOT-22 scores, comorbidities, social history, allergic status, and olfactory function. Computed tomography scans were performed to assess dental disease, implant numbers, implant protrusion depth, and sinus inflammation degree. Smoking and alcohol consumption were significant risk factors for odontogenic maxillary sinusitis development, whereas hypertension and older age were associated with an increased odontogenic FB risk. However, the four groups demonstrated no statistically significant differences in terms of Lund-Mackay scores, SNOT-22 scores, olfactory function tests, allergic status, or comorbidities. Periodontitis and the length of the intramaxillary implant protrusion were important contributing factors in odontogenic maxillary sinus diseases. Odontogenic maxillary sinusitis and odontogenic FB exhibit distinct pathophysiological and clinical characteristics; therefore, these conditions need to be thoroughly understood for effective patient management.

Laumen JGE, Van Dijck C, Manoharan-Basil SS, de Block T, Abdellati S, Xavier BB, Malhotra-Kumar S, Kenyon C. The effect of daily usage of Listerine Cool Mint mouthwash on the oropharyngeal microbiome: a substudy of the PReGo trial. *J Med Microbiol.* 2024 Jun;73(6). doi: 10.1099/jmm.0.001830. PMID: 38833520. <https://pubmed.ncbi.nlm.nih.gov/38833520/>

ABSTRACT

Introduction. Listerine[®] is a bactericidal mouthwash widely used to prevent oral health problems such as dental plaque and gingivitis. However, whether it promotes or undermines a healthy oral microbiome is unclear.**Hypothesis/Gap Statement.** We hypothesized that the daily use of Listerine Cool Mint would have a significant impact on the oropharyngeal microbiome.**Aim.** We aimed to assess if daily usage of Listerine Cool Mint influenced the composition of the pharyngeal microbiome.**Methodology.** The current microbiome substudy is part of the Preventing Resistance in Gonorrhoea trial. This was a double-blind single-centre, crossover, randomized controlled trial of antibacterial versus placebo mouthwash to reduce the incidence of gonorrhoea/chlamydia/syphilis in men who have sex with men (MSM) taking HIV pre-exposure prophylaxis (PrEP). Fifty-nine MSM taking HIV PrEP were enrolled. In this crossover trial, participants received 3 months of daily Listerine followed by 3 months of placebo mouthwash or vice versa. Oropharyngeal swabs were taken at baseline and after 3 months use of each mouthwash. DNA was extracted for shotgun me-

tagenomic sequencing (Illumina Inc.). Non-host reads were taxonomically classified with MiniKraken and Bracken. The alpha and beta diversity indices were compared between baseline and after each mouthwash use. Differentially abundant bacterial taxa were identified using ANOVA-like differential expression analysis. **Results.** Streptococcus was the most abundant genus in most samples (n = 103, 61.7 %) with a median relative abundance of 31.5% (IQR 20.6-44.8), followed by Prevotella [13.5% (IQR 4.8-22.6)] and Veillonella [10.0% (IQR 4.0-16.8)]. Compared to baseline, the composition of the oral microbiome at the genus level (beta diversity) was significantly different after 3 months of Listerine (P = 0.006, pseudo-F = 2.29) or placebo (P = 0.003, pseudo-F = 2.49, permutational multivariate analysis of variance) use. Fusobacterium nucleatum and Streptococcus anginosus were significantly more abundant after Listerine use compared to baseline. **Conclusion.** Listerine use was associated with an increased abundance of common oral opportunistic bacteria previously reported to be enriched in periodontal diseases, oesophageal and colorectal cancer, and systemic diseases. These findings suggest that the regular use of Listerine mouthwash should be carefully considered.

Lee C, Kim DY, Han JJ. Characteristics and impacts of dental implant displacement into the maxillary sinus. *J Dent Sci.* 2025 Apr;20(2):775-782. doi: 10.1016/j.jds.2024.10.013. Epub 2024 Oct 22. PMID: 40224111; PMCID: PMC11993010. <https://pubmed.ncbi.nlm.nih.gov/40224111/>

ABSTRACT

Background/purpose: Dental implants displaced into the maxillary sinus are considered to require surgical removal as the treatment of choice. However, displaced implants have been reported to affect the maxillary sinus in different ways. This study aimed to evaluate characteristics and impacts of dental implant displacement into the maxillary sinus.

Materials and methods: Fourteen sinuses with displaced implants into the maxillary sinus were included. Demographic data and radiographic images were analyzed, with a focus on the impact of various factors such as demographic data, timing of displacement, duration of retention, and residual bone height on maxillary sinus opacification and sinus wall thickness.

Results: Implants were displaced during or in the early stage after implant placement in 9 cases and after functional loading in 5 cases. Radiographic evaluations showed higher sinus opacification score (P = 0.019) and increased wall thickness (P = 0.198) in cases with displacement after functional loading, although the difference in wall thickness was not statistically significant. When the duration of implant retention in the sinus was longer, higher sinus opacification and sinus wall thickness were observed, although the differences were not statistically significant. Univariate regression analysis demonstrated that the timing of displacement significantly influenced maxillary sinus opacification (P = 0.013) and sinus wall thickness (P = 0.013). For all cases, evidence of site preparation and the use of short implants were not observed.

Conclusion: This study suggests that adequate pre-implant site preparation and timely intervention are essential to prevent and manage implant displacement into the maxillary sinus.

Lembo D, Caroccia F, Lopes C, Moscagiuri F, Sinjari B, D'Attilio M. Obstructive Sleep Apnea and Periodontal Disease: A Systematic Review. *Medicina (Kaunas).* 2021 Jun 21;57(6):640. doi: 10.3390/medicina57060640. PMID: 34205812; PMCID: PMC8235051.



<https://pubmed.ncbi.nlm.nih.gov/34205812/>

ABSTRACT

Background and Objectives: The objective of this study was to evaluate the association between periodontal disease and obstructive sleep apnea syndrome (OSAS). **Materials and Methods:** Electronic search using PubMed, Scopus, LILACS, and Cochrane library was carried out for randomized controlled trials, cohort, case-control, longitudinal and epidemiological studies on humans published from January 2009 until September 2020. The participants had to be male and female adults who were diagnosed with OSAS either by overnight polysomnography (carried out at a sleep laboratory or at home) or by a home sleep testing monitor (Apnea Risk Evaluation System). Methodological quality assessment was carried out using the Newcastle-Ottawa Quality Assessment Scale (NOS) for case-control studies while an adapted form of NOS was used for cross-sectional studies. **Results:** Ten studies fulfilled the inclusion criteria of our review, 5 were case-control studies, and 5 cross-sectional. Sample size ranged from 50 to 29,284 subjects, for a total of 43,122 subjects, 56% of them were male, their age ranged from 18 to 85 years old. The heterogeneity among the studies regarding the classification of periodontal disease, and the different methods for OSAS severity assessment, complicated the comparison among the studies. **Conclusions:** There is low evidence of a possible association between OSAS and periodontitis. The pathophysiological mechanism, cause-effect, or dose-response relationship are still unclear. Further studies are needed and should use a precise classification of OSAS subjects, while the new classification of periodontitis from the World Workshop of Chicago 2017 should be used for the periodontal assessment.

Lin J, Wang C, Wang X, Chen F, Zhang W, Sun H, Yan F, Pan Y, Zhu D, Yang Q, Ge S, Sun Y, Wang K, Zhang Y, Xian M, Zheng M, Mo A, Xu X, Wang H, Zhou X, Zhang L. Expert consensus on odontogenic maxillary sinusitis multi-disciplinary treatment. *Int J Oral Sci.* 2024 Feb 1;16(1):11. doi: 10.1038/s41368-024-00278-z. PMID: 38302479; PMCID: PMC10834456. <https://pubmed.ncbi.nlm.nih.gov/38302479/>

ABSTRACT

Odontogenic maxillary sinusitis (OMS) is a subtype of maxillary sinusitis (MS). It is actually inflammation of the maxillary sinus that secondary to adjacent infectious maxillary dental lesion. Due to the lack of unique clinical features, OMS is difficult to distinguish from other types of rhinosinusitis. Besides, the characteristic infectious pathogeny of OMS makes it is resistant to conventional therapies of rhinosinusitis. Its current diagnosis and treatment are thus facing great difficulties. The multi-disciplinary cooperation between otolaryngologists and dentists is absolutely urgent to settle these questions and to acquire standardized diagnostic and treatment regimen for OMS. However, this disease has actually received little attention and has been underrepresented by relatively low publication volume and quality. Based on systematically reviewed literature and practical experiences of expert members, our consensus focuses on characteristics, symptoms, classification and diagnosis of OMS, and further put forward multi-disciplinary treatment decisions for OMS, as well as the common treatment complications and relative managements. This consensus aims to increase attention to OMS, and optimize the clinical diagnosis and decision-making of OMS, which finally provides evidence-based options for OMS clinical management.

Liu QY, Liao Y, Wu YX, Diao H, Du Y, Chen YW, Xie JR, Xue WQ, He YQ, Wang TM, Zheng XH, Jia WH. The Oral Microbiome as Mediator between Oral Hygiene and Its Impact

on Nasopharyngeal Carcinoma. *Microorganisms.* 2023 Mar 10;11(3):719. doi: 10.3390/microorganisms11030719. PMID: 36985292; PMCID: PMC10058307. <https://pubmed.ncbi.nlm.nih.gov/36985292/>

ABSTRACT

Oral hygiene and the alteration of the oral microbiome have been linked to nasopharyngeal carcinoma (NPC). This study aimed to investigate whether the oral microbiome plays a mediating role in the relationship between oral hygiene and NPC, and identify differential microbial taxonomies that potentially mediated this association. We conducted a case-control study that involved 218 NPC patients and 192 healthy controls. The 16S rRNA gene sequencing of the V4 region was performed to evaluate the composition of the oral microbiome. Mediation analysis was applied to explore the relationship among oral hygiene, the oral microbiome and NPC. We found that dental fillings and poor oral hygiene score were associated with increased risks of NPC (OR = 2.51 (1.52-4.25) and OR = 1.54 (1.02-2.33)). Mediation analysis indicated that dental fillings increased the risk of NPC by altering the abundance of Erysipelotrichales, Erysipelotrichaceae, Solobacterium and Leptotrichia wadei. In addition, Leptotrichia wadei also mediated the association between oral hygiene score and the risk of NPC. Our study confirmed that poor oral hygiene increased the risk of NPC, which was partly mediated by the oral microbiome. These findings might help us to understand the potential mechanism of oral hygiene influencing the risk of NPC via the microbiome.

Liu S, Huang X, Wang L, Li Z. Unraveling the Genetic Link: Exploring the Causal Relationship Between Periodontitis and Allergic Rhinitis. *Int J Rheum Dis.* 2025 Jan;28(1):e70011. doi: 10.1111/1756-185X.70011. PMID: 39865615. <https://pubmed.ncbi.nlm.nih.gov/39865615/>

ABSTRACT

Background: Observational studies have suggested an association between periodontitis and allergic rhinitis (AR), yet the causality of this relationship remains unclear.

Objective: To investigate the potential bidirectional causal relationship between periodontitis and AR using a Mendelian randomization (MR) approach.

Methods: A two-sample MR analysis was conducted using genome-wide association study (GWAS) summary statistics. Single-nucleotide polymorphisms (SNPs) associated with periodontitis and AR were used as instrumental variables. The inverse-variance weighted (IVW) method was the primary analysis, complemented by MR-Egger and weighted median approaches. Sensitivity analyses tested for heterogeneity and horizontal pleiotropy.

Results: The MR analysis found no evidence of a significant causal effect in either direction. Periodontitis was not causally associated with AR (IVW OR = 0.233; 95% CI, 0.035–1.541; p = 0.131), nor was AR causally associated with periodontitis. Sensitivity analyses supported the robustness of these findings, with no evidence of pleiotropy or heterogeneity.



Conclusion: This study found no genetic evidence for a direct causal relationship between periodontitis and allergic rhinitis. While observational associations exist, they may reflect shared inflammatory pathways or confounding factors. Further research is needed to explore underlying mechanisms beyond genetic predisposition.

Desentrañando el vínculo genético: explorando la relación causal entre la periodontitis y la rinitis alérgica

Antecedentes: Estudios observacionales han sugerido una asociación entre la periodontitis y la rinitis alérgica (RA), aunque la causalidad de esta relación aún no está clara.

Objetivo: Investigar la posible relación causal bidireccional entre la periodontitis y la RA mediante un enfoque de aleatorización mendeliana (Mendelian Randomization, MR).

Métodos: Se realizó un análisis de MR bidireccional utilizando estadísticas resumidas de estudios de asociación genética a nivel del genoma (GWAS). Se emplearon polimorfismos de nucleótido único (SNPs) asociados con periodontitis y RA como variables instrumentales. El método de varianza inversa ponderada (IVW) fue el análisis principal, complementado con enfoques MR-Egger y mediana ponderada. Se realizaron análisis de sensibilidad para evaluar la heterogeneidad y la pleiotropía horizontal.

Resultados: El análisis de MR no encontró evidencia de un efecto causal significativo en ninguna dirección. La periodontitis no se asoció causalmente con la RA (IVW OR = 0,233; IC 95 %: 0,035–1,541; p = 0,131), ni viceversa. Los análisis de sensibilidad confirmaron la solidez de estos hallazgos, sin evidencia de pleiotropía ni heterogeneidad.

Conclusión: Este estudio no halló evidencia genética que respalde una relación causal directa entre la periodontitis y la rinitis alérgica. Aunque existen asociaciones observacionales, estas podrían deberse a vías inflamatorias compartidas o factores de confusión. Se necesita más investigación para explorar mecanismos subyacentes más allá de la predisposición genética.

Maniaci A, Lavalle S, Anzalone R, Lo Giudice A, Cocuzza S, Parisi FM, Torrisi F, Iannella G, Sireci F, Fadda G, Lentini M, Masiello E, La Via L. Oral Health Implications of Obstructive Sleep Apnea: A Literature Review. *Biomedicines*. 2024 Jun 21;12(7):1382. doi: 10.3390/biomedicines12071382. PMID: 39061956; PMCID: PMC11274061. <https://pubmed.ncbi.nlm.nih.gov/39061956/>

ABSTRACT

Background: Obstructive sleep apnea (OSA) is a prevalent sleep disorder characterized by repeated episodes of partial or complete obstruction of the upper airway during sleep. While the systemic implications of OSA are well documented, the dental consequences are less frequently discussed yet equally significant. This review aims to elucidate the oral health impacts of OSA, emphasizing the importance of interdisciplinary care.

Methods: A comprehensive literature search was conducted across several databases to identify studies examining the relationship between OSA and various oral health parameters. The review included observational studies, clinical trials, and systematic reviews published in English up to January 2024.

Results: OSA was significantly associated with heightened risks of bruxism, dry mouth, periodontal disease, temporomandibular joint disorders, palatal and dental changes, and alterations in taste sensation. Mouth breathing associated with OSA was a critical factor in exacerbating xerostomia and dental caries. Furthermore, the systemic inflammation induced by OSA appeared to correlate with the severity of periodontal disease. Patients using oral appliance therapy for OSA also showed notable changes in dental occlusion and required ongoing dental monitoring.

Conclusions: The findings underscore the bidirectional relationship between OSA and oral health, highlighting the need for dental professionals to be integral participants in the management of OSA. Early dental evaluation and intervention can contribute to the overall health and quality of life of individuals with OSA. The review advocates for the development of clinical guidelines to facilitate the early identification and management of OSA-related oral health issues within dental practice and encourages a collaborative approach to patient care.

Mukherjee S, Galgali SR. Obstructive sleep apnea and periodontitis: A cross-sectional study. *Indian J Dent Res*. 2021 Jan-Feb;32(1):44-50. doi: 10.4103/ijdr.IJDR_534_19. PMID: 34269236. <https://pubmed.ncbi.nlm.nih.gov/34269236/>

ABSTRACT

Objectives: (1) To assess the risk of Obstructive Sleep Apnea (OSA) using a pre-designed questionnaire; (2) To assess the periodontal parameters like pocket probing depth (PPD) and clinical attachment loss (CAL) in the study subjects and (3) To determine the association between the shared risk factors of OSA and periodontitis.

Background of the study: Periodontitis is a microbially associated, host-mediated inflammatory disease that results in the loss of periodontal attachment. It has multifactorial etiology and has been linked to an array of systemic diseases. Though both periodontitis and obstructive sleep apnoea (OSA) share some common risk factors, the insight into the hypothetical speculative link remains vague. This study intended to probe into the association between periodontitis and OSA.

Methodology: A cross-sectional study was conducted on 250 subjects. The subjects were explained the nature of the study and written informed consent was obtained for participation in the study. The patients were administered a STOP-BANG questionnaire following which the periodontal parameters were recorded. The data obtained was analyzed by descriptive and inferential statistics.

Results: A statistically significant increase in PPD and CAL scores were seen with the increase in OSA scores. A significant moderate positive correlation was found between OSA scores and PPD [$r = 0.58, P < 0.001$] and CAL [$r = 0.55, P = 0.001$]. Males were at increased risk for OSA and periodontitis. Age, hypertension and BMI which are the risk factors for periodontitis were also significantly higher in subjects at high risk for OSA.

Conclusion: This study found a moderate positive association between periodontitis and OSA.

Mustakim KR, Eo MY, Lee JY, Cho YJ, Seo MH, Kim SM. Appropriate Implant Rehabilitation in Patients With Iatrogenic Oroantral Fistula and Odontogenic Maxillary Sinusitis. *J Craniofac Surg*. 2023 Jan-Feb 01;34(1):e92-e96. doi: 10.1097/SCS.00000000000009099.



Epub 2022 Oct 31. PMID: 36608090. <https://pubmed.ncbi.nlm.nih.gov/36608090/>

ABSTRACT

Oroantral fistula (OAF) is the most common etiology for odontogenic maxillary sinusitis that can be caused by tooth extractions, failed maxillary sinus lifts, bone grafts, and poor positioning of dental implant fixtures. A 52-year-old man presented with an OAF and maxillary sinusitis after implant placement and bone grafting. The authors treated the patient with modified endoscopic sinus surgery to obtain OAF closure and provided dental implant placement procedures afterward. The authors also treated 8 other similar cases with favorable outcomes. In this study, the authors report the know-how of implant placement procedures in patients with OAF and maxillary sinusitis.

Plummer EL, Maddaford K, Murray GL, Fairley CK, Pasricha S, Mu A, Bradshaw CS, Williamson DA, Chow EPF. The Impact of Mouthwash on the Oropharyngeal Microbiota of Men Who Have Sex with Men: a Substudy of the OMEGA Trial. *Microbiol Spectr*. 2022 Feb 23;10(1):e0175721. doi: 10.1128/spectrum.01757-21. Epub 2022 Jan 12. PMID: 35019769; PMCID: PMC8754113. <https://pubmed.ncbi.nlm.nih.gov/35019769/>

ABSTRACT

Mouthwash is a commonly used product and has been proposed as an alternative intervention to prevent gonorrhea transmission. However, the long-term effects of mouthwash on the oral microbiota are largely unknown. We investigated the impact of 12 weeks of daily mouthwash use on the oropharyngeal microbiota in a subset of men who have sex with men who participated in a randomized trial comparing the efficacy of two alcohol-free mouthwashes for the prevention of gonorrhea. We characterized the oropharyngeal microbiota using 16S rRNA gene sequencing of tonsillar fossae samples collected before and after 12 weeks of daily use of Listerine mouthwash or Biotène dry mouth oral rinse. Permutational multivariate analysis of variance (PERMANOVA) was used to assess differences in oropharyngeal microbiota composition following mouthwash use. Differential abundance testing was performed using ALDEx2, with false-discovery rate correction. A total of 306 samples from 153 men were analyzed (Listerine, n = 78 and Biotène, n = 75). There was no difference in the overall structure of the oropharyngeal microbiota following Listerine or Biotène use (PERMANOVA P = 0.413 and P = 0.331, respectively). Although no bacterial taxa were significantly differentially abundant following Listerine use, we observed a small but significant decrease in the abundance of both *Streptococcus* and *Leptotrichia* following Biotène use. Overall, our findings suggest that daily use of antiseptic mouthwash has minimal long-term effects on the composition of the oropharyngeal microbiota. **IMPORTANCE** Given the role of the oral microbiota in human health, it is important to understand if and how external factors influence its composition. Mouthwash use is common in some populations, and the use of antiseptic mouthwash has been proposed as an alternative intervention to prevent gonorrhea transmission. However, the long-term effect of mouthwash use on the oral microbiota composition is largely unknown. We found that daily use of two different commercially available mouthwashes had limited long-term effects on the composition of the oropharyngeal microbiota over a 12-week period. The results from our study and prior studies highlight that different mouthwashes may differentially affect the oral microbiome composition and that further studies are needed to determine if mouthwash use induces short-term changes to the oral microbiota that may have detrimental effects.

Rao KN, Mehta R, Dange P, Nagarkar NM. Alcohol-Containing Mouthwash and the

Risk of Oral Cancer: Exploring the Association. *Indian J Surg Oncol*. 2024 Sep;15(3):553-556. doi: 10.1007/s13193-024-01948-4. Epub 2024 May 8. PMID: 39239449; PMCID: PMC11371988. <https://pubmed.ncbi.nlm.nih.gov/39239449/>

ABSTRACT

Oral cavity and larynx cancers are generally associated with tobacco consumption, alcohol abuse or both. Mouthwashes are liquid antiseptic solutions that decrease the microbial load in the oral cavity. Alcohol is often used in mouthwashes for its antiseptic functions and as a carrier for some active ingredients, including menthol or thymol, helping them penetrate the plaque. There is some evidence for alcohol-containing mouthwash use which is associated with the potential risk of developing carcinoma of oral cavity. The results are inconclusive, as actual mouthwash use patterns may be inconsistent and cannot be easily quantified. Based on the available data, there is no sufficient evidence to accept the proposition that the use of mouthwashes containing alcohol can influence the development of oral cancer.

Riekki VP, Nevalainen MT, Haapea M, Sipola A, Kallio-Pulkkinen S, Bode MK. Associations between odontogenic and sinus pathologies - a low-dose CBCT study. *Acta Odontol Scand*. 2025 Jun 3;84:310-317. doi: 10.2340/aos.v84.43779. PMID: 40457876; PMCID: PMC12147669. <https://pubmed.ncbi.nlm.nih.gov/40457876/>

ABSTRACT

Objective: To evaluate maxillary sinus and odontogenic findings in low-dose CBCT, and to test if associations exist between these findings. **Methods:** From 263 consecutive CBCT scans, 212 were included. Evaluated odontogenic parameters were periapical lesions (PAI), marginal periodontal bone loss (PBL), root contact to the maxillary sinus, the presence of crowns, implants, defective restorations and extensive caries. Maxillary sinus findings were categorized as mucosal thickening (MT; generalized and localized), mucosal retention cysts, and opacification/fluid level. Crosstabulations and generalized estimating equations were used as statistical tests. Prevalence and bias adjusted kappas were calculated for inter- and intra-observer agreement.

Results: The only dental finding statistically associated with sinus pathology when compared to healthy sinuses was root contact, which increased the risk for generalized MT (OR = 1.47, p = 0.015), mucosal retention cysts (OR = 2.60, p < 0.001) and opacification/fluid (OR = 1.76, p = 0.018). All parameters showed almost perfect or substantial intra- and interobserver reliability, except for PBL, where the former was moderate and the latter fair.

Conclusion: Root contact was the only dental finding significantly associated with sinus pathology. Thus, there may be fewer associations between radiological dental findings and sinus pathology than previously thought. With the exception of PBL, all parameters demonstrated at least substantial intra- and interobserver reliability, indicating that the assessment is reliable overall.

Saibene AM, Pipolo C, Borloni R, Felisati G. ENT and dentist cooperation in the management of odontogenic sinusitis. A review. *Acta Otorhinolaryngol Ital*. 2021 Apr;41(Suppl. 1):S116-S123. doi: 10.14639/0392-100X-suppl.1-41-2021-12. PMID: 34060527; PMCID: PMC8172100. <https://pubmed.ncbi.nlm.nih.gov/34060527/>



ABSTRACT

La collaborazione tra otorinolaringoiatra e odontoiatra nel trattamento delle sinusiti odontogene.

Riassunto: Le sinusiti odontogene rappresentano per definizione una condizione al confine tra otorinolaringoiatria e odontoiatria e, da un punto di vista olistico, non possono essere gestite in assenza di una proficua collaborazione tra specialisti diversi. Questa review si focalizza sui diversi scenari attualmente considerati nella letteratura internazionale come correlati alle sinusiti odontogene e sulle complicanze naso-sinusali di patologia o trattamento odontoiatrico. Conseguentemente, questa review andrà a trattare tutte le infezioni dei seni paranasali causate non solo dalla patologia di interesse odontoiatrico (es. parodontite e carie), ma anche conseguenti a trattamenti odontoiatrici classici (estrazioni, endodonzia, et similia), procedure implantologiche, procedure pre-implantologiche (rialzo del seno mascellare) e osteonecrosi del mascellare da farmaci. Dopo aver trattato la diagnosi delle sinusiti odontogene e i principi generali di terapia, ci focalizzeremo sulla gestione specifica dei singoli quadri di patologia. Questa revisione della letteratura mostra che, per quanto siano fortemente necessari un numero maggiore di studi prospettici per determinare il miglior approccio terapeutico per ciascun paziente affetto da sinusite odontogena, il mero numero di scenari diversi che si possono incontrare dovrebbe essere sufficiente a stimolare la mutua collaborazione tra otorinolaringoiatri e odontoiatri. Tale collaborazione è necessaria per perfezionare la fase diagnostica e di trattamento e per realizzare un solido fondamento scientifico e medico-legale per qualsiasi proposta terapeutica venga rivolta ai pazienti.

Saibene AM, Allevi F, Calvo-Henriquez C, Maniaci A, Mayo-Yáñez M, Paderno A, Vaira LA, Felisati G, Craig JR. Reliability of large language models in managing odontogenic sinusitis clinical scenarios: a preliminary multidisciplinary evaluation. *Eur Arch Otorhinolaryngol.* 2024 Apr;281(4):1835-1841. doi: 10.1007/s00405-023-08372-4. Epub 2024 Jan 8. PMID: 38189967; PMCID: PMC10943141. <https://pubmed.ncbi.nlm.nih.gov/38189967/>

ABSTRACT

Purpose: This study aimed to evaluate the utility of large language model (LLM) artificial intelligence tools, Chat Generative Pre-Trained Transformer (ChatGPT) versions 3.5 and 4, in managing complex otolaryngological clinical scenarios, specifically for the multidisciplinary management of odontogenic sinusitis (ODS).

Methods: A prospective, structured multidisciplinary specialist evaluation was conducted using five ad hoc designed ODS-related clinical scenarios. LLM responses to these scenarios were critically reviewed by a multidisciplinary panel of eight specialist evaluators (2 ODS experts, 2 rhinologists, 2 general otolaryngologists, and 2 maxillofacial surgeons). Based on the level of disagreement from panel members, a Total Disagreement Score (TDS) was calculated for each LLM response, and TDS comparisons were made between ChatGPT3.5 and ChatGPT4, as well as between different evaluators.

Results: While disagreement to some degree was demonstrated in 73/80 evaluator reviews of LLMs' responses, TDSs were significantly lower for ChatGPT4 compared to ChatGPT3.5. Highest TDSs were found in the case of complicated ODS with orbital abscess, presumably due to increased case complexity with dental, rhinologic, and orbital factors affecting diagnostic and therapeutic options. There were no statistically significant differences in TDSs between evaluators' specialties, though ODS experts and maxillofacial

surgeons tended to assign higher TDSs.

Conclusions: LLMs like ChatGPT, especially newer versions, showed potential for complimenting evidence-based clinical decision-making, but substantial disagreement was still demonstrated between LLMs and clinical specialists across most case examples, suggesting they are not yet optimal in aiding clinical management decisions. Future studies will be important to analyze LLMs' performance as they evolve over time.

Scaini R, Berzaghi A, Saibene AM, Taschieri S, Testori T. Dental Evaluation: Oral Surgery-Related Complications. *Otolaryngol Clin North Am.* 2024 Dec;57(6):1083-1097. doi: 10.1016/j.otc.2024.07.012. Epub 2024 Aug 30. PMID: 39214738. <https://pubmed.ncbi.nlm.nih.gov/39214738/>

ABSTRACT

The article provides an in-depth review focused on diagnosing oral surgery-related complications that may cause odontogenic sinusitis (ODS). It emphasizes the importance of evaluating patients with prior oral surgical procedures to determine whether the prior procedure is an ongoing infectious source of the ODS. Specifically, diagnostic evaluations will be described for detecting oroantral communications and fistulas, dental implant dislocation or protrusion, and whether implants and graft placed in maxillary sinuses are infected. It highlights the role of different oral examination techniques, optimal imaging modalities, and the importance of otolaryngologic collaboration to evaluate for infectious ODS.

Schertel Cassiano L, Jensen AB, Pajaniaye J, Lopez R, Fjaeldstad AW, Nascimento GG. Periodontitis is associated with impaired olfactory function: A clinical study. *J Periodontal Res.* 2025 Jan;60(1):55-63. doi: 10.1111/jre.13315. Epub 2024 Jun 18. PMID: 38888002; PMCID: PMC11840459. <https://pubmed.ncbi.nlm.nih.gov/38888002/>

ABSTRACT

Aim: To explore the association between periodontitis and olfactory disorders.

Methods: Clinical data were collected from 198 individuals between the ages of 18 and 60 years living in Denmark. The exposure was periodontitis, and the outcome was olfactory function (Threshold, Discrimination, Identification - TDI score), both measured clinically. Covariates included sex, age, education level, income, usage of nasal spray, tongue coating, halitosis, xerostomia, smoking, and history of COVID-19. Structural equation modeling was used to estimate the association between periodontitis and olfactory function. Periodontitis was defined using the AAP/EFP classification and dichotomized into "no" (healthy subjects) and "yes" (Stages I, II, and III). Olfactory function was treated as a one-factor latent variable, including the different olfactory scores. In addition, extra models were performed considering each olfactory component as a separate outcome and the TDI Global Score.

Results: The results showed that periodontitis was associated with a lower olfactory function [standardized coefficient (SC) -0.264, 95% CI -0.401, -0.118]. Additionally, periodontitis was also associated with a lower olfactory Threshold (odorant concentration required for detection) (SC -0.207, 95% CI -0.325, -0.089), Discrimination (ability to discriminate between odorants) (SC -0.149, 95% CI -0.270, -0.027), Identification



(ability to identify odorants) scores (SC -0.161, 95% CI -0.277, -0.045), and TDI Global Score (SC -0.234, 95% CI -0.370, -0.099).

Conclusions: This study suggests that periodontitis is associated with olfactory impairment.

Schertel Cassiano L, Ribeiro AP, Peres MA, Lopez R, Fjældstad A, Marchini L, Nascimento GG. Self-reported periodontitis association with impaired smell and taste: A multicenter survey. *Oral Dis.* 2024 Apr;30(3):1516-1524. doi: 10.1111/odi.14601. Epub 2023 Apr 28. PMID: 37114436. <https://pubmed.ncbi.nlm.nih.gov/37114436/>

ABSTRACT

Objectives: To investigate the association between self-reported periodontitis and the senses of taste and smell among employees of one Danish and two American universities.

Materials and methods: Data were collected through a digital survey. A total of 1239 individuals from Aarhus University - Denmark, the University of Iowa, and the University of Florida - USA were included. Self-reported periodontitis was the exposure. The perceived senses of taste and smell were the outcomes and were measured through a visual analog scale (VAS). Self-perceived halitosis was the mediator. Confounders were age, sex, income, education, xerostomia, COVID-19, smoking, body mass index, and diabetes. The total effect was decomposed into direct and indirect using a counterfactual approach.

Results: The total effect of periodontitis on an impaired sense of taste was OR 1.56 (95% CI [1.02, 2.09]), of which 23% was mediated by halitosis (OR 1.13; 95% CI [1.03, 1.22]). Additionally, individuals with self-reported periodontitis had a 53% higher chance of having impaired smell (OR 1.53; 95% CI [1.00, 2.04]), with halitosis mediating 21% of the total effect (OR 1.11; 95% CI [1.02, 1.20]).

Conclusion: Our findings suggest that periodontitis is associated with distorted senses of taste and smell. Additionally, this association appears to be mediated by halitosis.

Schertel Cassiano L, Leite FRM, Alves-Costa S, Costa SA, Nascimento GG. Oral conditions are associated with salt taste disability among American adults. *Oral Dis.* 2024 Nov;30(8):5475-5482. doi: 10.1111/odi.14926. Epub 2024 Apr 2. PMID: 38566452; PMCID: PMC11610664. <https://pubmed.ncbi.nlm.nih.gov/38566452/>

ABSTRACT

Aim: To explore the association between oral conditions and their interaction with salt taste disability among American adults.

Methods: Data from the 2013-2014 NHANES cycle were used (n = 2373). The exposures were periodontitis, defined by the 2017 EFP-AAP classification, dental caries, missing teeth, and edentulism, as per the DMF-T index, and xerostomia. The outcome was salt taste disability, objectively assessed. Covariates included sex, age, educational level, poverty index, obesity, diabetes, smoking, alcohol consumption, and medications related to mouth dryness. Weighted multivariable logistic regression modeling was used to evaluate the relationship between oral conditions and their interaction and salt taste disability.

Results: Participants who reported xerostomia were more likely to have salt taste disability (OR 2.42; 95%CI 1.44-4.07), especially those older than 60 years (OR 3.63; 95%CI 1.72-7.63). Among participants aged 40-59, xerostomia increased the chance of salt taste disability; however, the confidence interval included the null value. The interactions between xerostomia and edentulism increased the chance of salt taste disability.

Conclusion: Oral conditions seem to influence the ability to taste salt. Dental professionals may help identify individuals with taste alterations and raise their awareness of the risk of systemic diseases that require the reduction of salt intake.

Schilder AG, Chonmaitree T, Cripps AW, Rosenfeld RM, Casselbrant ML, Haggard MP, Venekamp RP. Otitis media. *Nat Rev Dis Primers.* 2016 Sep 8;2(1):16063. doi: 10.1038/nrdp.2016.63. PMID: 27604644; PMCID: PMC7097351. <https://pubmed.ncbi.nlm.nih.gov/27604644/>

ABSTRACT

Otitis media (OM) or middle ear inflammation is a spectrum of diseases, including acute otitis media (AOM), otitis media with effusion (OME; 'glue ear') and chronic suppurative otitis media (CSOM). OM is among the most common diseases in young children worldwide. Although OM may resolve spontaneously without complications, it can be associated with hearing loss and life-long sequelae. In developing countries, CSOM is a leading cause of hearing loss. OM can be of bacterial or viral origin; during 'colds', viruses can ascend through the Eustachian tube to the middle ear and pave the way for bacterial otopathogens that reside in the nasopharynx. Diagnosis depends on typical signs and symptoms, such as acute ear pain and bulging of the tympanic membrane (eardrum) for AOM and hearing loss for OME; diagnostic modalities include (pneumatic) otoscopy, tympanometry and audiometry. Symptomatic management of ear pain and fever is the mainstay of AOM treatment, reserving antibiotics for children with severe, persistent or recurrent infections. Management of OME largely consists of watchful waiting, with ventilation (tympanostomy) tubes primarily for children with chronic effusions and hearing loss, developmental delays or learning difficulties. The role of hearing aids to alleviate symptoms of hearing loss in the management of OME needs further study. Insertion of ventilation tubes and adenoidectomy are common operations for recurrent AOM to prevent recurrences, but their effectiveness is still debated. Despite reports of a decline in the incidence of OM over the past decade, attributed to the implementation of clinical guidelines that promote accurate diagnosis and judicious use of antibiotics and to pneumococcal conjugate vaccination, OM continues to be a leading cause for medical consultation, antibiotic prescription and surgery in high-income countries.

Silva EJNL, Pinto KP, Versiani MA, Sassone LM. Dental Pathophysiology of Odontogenic Sinusitis: Endodontic Infections. *Otolaryngol Clin North Am.* 2024 Dec;57(6):941-955. doi: 10.1016/j.otc.2024.06.007. Epub 2024 Aug 1. PMID: 39089983. <https://pubmed.ncbi.nlm.nih.gov/39089983/>

ABSTRACT

Bacterial odontogenic sinusitis (ODS) arises from maxillary dental issues or oral procedures, and affects at least the maxillary sinuses, with or without other paranasal sinus involvement. It has been historically un-



derreported, in contrast to more recent findings attributing 25-40% of chronic maxillary sinusitis to dental causes. Endodontic infections represent one of the most common causes of ODS. Endodontic factors like root canal infection and microbial proximity to sinus cavities play pivotal roles. Host immunological responses further shape disease severity and progression. This article aims to explore the complexity of endodontic infections that cause ODS, elucidating anatomical, microbial, and immunological aspects.

Sun S, He R, Chen S, Ren J, Ma X, Yang J. Odontogenic brain abscess caused by *Porphyromonas gingivalis* and *Streptococcus constellatus*: a case report and review article. *J Oral Microbiol.* 2025 Apr 14;17(1):2485197. doi: 10.1080/20002297.2025.2485197. PMID: 40242593; PMCID: PMC12001842. <https://pubmed.ncbi.nlm.nih.gov/40242593/>

ABSTRACT

Background: Odontogenic brain abscess is a rare, but potentially fatal, central nervous system infection, with insidious onset and unclear etiology.

Methods: This case reports a 70-year-old male patient who developed an odontogenic brain abscess secondary to periodontal infection and underwent neurological surgery. Extract pus during surgery for the metagenomic next-generation sequencing (mNGS).

Results: The mNGS of pus samples obtained from brain abscess aspiration identified the periodontal pathogens *Porphyromonas gingivalis* and *Streptococcus constellatus*. Consequently, he was referred to the department of stomatology for further examination and treatment.

Conclusions: Our study found that major periodontal pathogens including *P. gingivalis* and *S. constellatus* were essential in the development of odontogenic brain abscesses; thus, timely intervention and preventive measures are important for treatment.

Tastan Eroglu Z, Kalender ME, Ucan Yarkac F, Babayigit O, Ozkan Sen D. Impact of non-surgical periodontal therapy on self-perceived halitosis, and the senses of smell and taste: a prospective clinical study. *BMC Oral Health.* 2025 Feb 28;25(1):321. doi: 10.1186/s12903-025-05702-2. PMID: 40022178; PMCID: PMC11869614. <https://pubmed.ncbi.nlm.nih.gov/40022178/>

ABSTRACT

Background: Periodontal diseases could cause halitosis and may impair taste and smell. While non-surgical periodontal therapy is known to reduce halitosis, its effects on taste and smell are less studied. This study aims to investigate the factors influencing self-perceived halitosis, taste, and smell, as well as the changes in these perceptions after periodontal therapy.

Methods: A total of 183 participants were divided into three groups: 61 patients with periodontitis, 61 with gingivitis, and 61 who were gingivally healthy. Periodontal parameters and self-perceived halitosis, taste, and smell were evaluated at baseline and four weeks after non-surgical periodontal treatment using a visual analog scale (VAS). Robust regression analysis was used to assess independent variables influencing baseline VAS ratings.

Results: The periodontitis group had the lowest taste perception and the highest self-perceived halitosis scores ($p < 0.05$). Taste perception was negatively associated with ≥ 4 mm pockets ($p = 0.002$). A positive relationship was also observed between the plaque index and self-perceived halitosis ($p = 0.030$). Post-treatment, taste perception improved significantly in all groups ($p < 0.05$), in parallel with improvements in periodontal parameters. Additionally, self-perceived halitosis showed a significant decrease ($p < 0.05$). The improvement in smell perception was statistically significant in the gingivally healthy and periodontitis groups ($p < 0.05$).

Conclusions: Periodontal disease may contribute to the development of chemosensory disorders. While the main goal of periodontal treatment is disease management, it can also improve taste and smell function. Oral hygiene practices play an essential role in the development of these improvements. However, further research is needed on the subject.

Tonetti MS. Dental Pathophysiology of Odontogenic Sinusitis: Periodontitis. *Otolaryngol Clin North Am.* 2024 Dec;57(6):957-975. doi: 10.1016/j.otc.2024.07.020. Epub 2024 Sep 2. PMID: 39227245. <https://pubmed.ncbi.nlm.nih.gov/39227245/>

ABSTRACT

Periodontitis is a highly prevalent oral microbial biofilm-driven chronic inflammatory disease. If unmanaged, periodontitis leads to progressive destruction of the ligamentous attachments of teeth to the alveolar bone and resorption of the alveolar bone. It eventually leads to tooth hypermobility and loss. Periodontitis commonly causes overlying maxillary sinus inflammation (mucositis), reflected on radiographic imaging as maxillary sinus mucosal thickening. While uncommon, advanced periodontitis (stage III/IV) or chronic perio-endo lesions can lead to purulent odontogenic sinusitis (ODS). This article describes periodontitis pathophysiology, diagnostic features, and its potential to cause ODS. Clinical practice guideline conform therapy is very successful in managing periodontitis and enabling long-term tooth retention. Localized tooth extraction is reserved to end-stage disease.

Tröltzsch M. Epidemiology of Odontogenic Sinusitis. *Otolaryngol Clin North Am.* 2024 Dec;57(6):919-926. doi: 10.1016/j.otc.2024.07.001. Epub 2024 Aug 13. PMID: 39142997. <https://pubmed.ncbi.nlm.nih.gov/39142997/>

ABSTRACT

Odontogenic sinusitis (ODS) is more common than historically thought, representing 25% to 40% of all maxillary sinusitis. Due to a lack of widely accepted diagnostic criteria and a specific international diagnostic code, a true overall prevalence is unknown. ODS may be caused by either a multitude of infectious dental pathologies or complications after dental procedures. The most common dental etiologies causing ODS are apical periodontitis (endodontic) and oroantral communication or fistula after dental extraction. Less commonly, ODS can evolve after dental implant or maxillary sinus bone grafting surgeries, infection of odontogenic cysts, or advanced periodontitis.

Wu J, Zheng M, Zhao Y, Yin W, Sima Y, Zhao J, Wang X, Lin J, Zhang L. Bacterial diversity and community characteristics of the sinus and dental regions in adults with odontogenic sinusitis. *BMC Microbiol.* 2023 Jul 29;23(1):201. doi: 10.1186/s12866-023-02917-7. PMID: 37444444



37516855; PMID: PMC10386777. <https://pubmed.ncbi.nlm.nih.gov/37516855/>

ABSTRACT

Background: The microbiome plays a crucial role in odontogenic sinusitis (OS); however, the bacterial characteristics of the sinuses and connected dental regions in OS are poorly understood. In this study, nasal secretion samples were collected from 41 OS patients and 20 simple nasal septum deviation patients, and oral mucosa samples from dental regions were collected from 28 OS patients and 22 impacted tooth extraction patients. DNA was extracted, and 16S rRNA sequencing was performed to explore the characteristics and structure of the microbiome in the sinuses and dental regions of OS patients.

Results: The alpha diversity of the oral and nasal microbiomes in OS patients was higher than that in controls. Principal coordinate analysis (PCoA) showed that oral samples clustered separately from nasal samples, and the beta diversity of oral and nasal samples in OS patients was higher than that in controls. The dominant phylum was Bacteroidetes in OS patients and Firmicutes in controls in both the oral and nasal cavity. The dominant genera in the oral microbiome and nasal microbiome of OS patients were similar, including *Fusobacterium*, *Porphyromonas* and *Prevotella*. Co-occurrence network analysis showed decreased microbial connectivity in the oral mucosa and nasal secretion samples of OS patients.

Conclusions: Odontogenic infection promotes structural and functional disorders of the nasal microbiome in OS. The interaction of dominant pathogens in the nasal and oral regions may promote the development of OS. Our study provides the microbiological aetiology of the nasal and connected dental regions in OS and is expected to provide novel insights into the diagnosis and therapeutic strategies for OS.

Wuokko-Landén A, Välimaa H, Blomgren K, Suomalainen A. Dental findings frequently overlooked in sinus computed tomography reports. *PLoS One*. 2024 Apr 30;19(4):e0299489. doi: 10.1371/journal.pone.0299489. PMID: 38687757; PMID: PMC11060568. <https://pubmed.ncbi.nlm.nih.gov/38687757/>

ABSTRACT

Objectives: Computed tomography (CT) and cone beam computed tomography (CBCT) represent the main imaging modalities used in rhinosinusitis patients and are also important in odontogenic sinusitis (OS) diagnostics. Reports, however, often lack information on dentition. Here, we aimed to determine how maxillary dentition is initially interpreted in rhinosinusitis patients' CT/CBCT reports and which dental findings in particular are potentially missed, thus needing more attention.

Study design: CT/CBCT scans and radiological reports from 300 rhinosinusitis patients were analysed focusing specifically on dental findings. An experienced oral and maxillofacial radiologist re-evaluated the scans and the assessment was compared to the original reports using the McNemar test.

Results: From the 300 original reports, 233 (77.7%) mentioned the maxillary teeth. The most frequent statement (126/300, 42.0%) was 'no apical periodontitis'. Apical periodontitis and severe alveolar bone loss were significantly overlooked ($p < 0.001$). Amongst the 225 patients for whom the CT/CBCT report initially lacked information on dental pathology, 22 patients were diagnosed with apical periodontitis and 16 with severe alveolar bone loss upon re-evaluation.

Conclusions: Dental pathology remains underreported in rhinosinusitis patients' CT/CBCT reports. Because these reports affect OS diagnostics, a routine and structured review of the maxillary teeth by a radiologist is necessary. Such examinations should encompass the maxillary teeth.

Yu AJ, Espinosa M, Adappa ND, Douglas JE. Complicated Odontogenic Sinusitis: Extrasinus Infectious Spread. *Otolaryngol Clin North Am*. 2024 Dec;57(6):1019-1030. doi: 10.1016/j.otc.2024.06.003. Epub 2024 Jul 23. PMID: 39048507. <https://pubmed.ncbi.nlm.nih.gov/39048507/>

ABSTRACT

Odontogenic sinusitis (ODS) is a common cause of orbital, intracranial, and osseous infectious extra-sinus complications. Dental infections can spread to the orbital or intracranial spaces through the sinuses via thrombophlebitis or direct extension, or from the dentition or oral cavity via vascular channels in the maxillary alveolar bone. ODS typically presents with unilateral involvement both clinically and radiographically. Any suspicion for extrasinus spread based on history and physical examination should be followed by appropriate imaging, formal dental evaluation, and, when appropriate, ophthalmology and neurosurgery consultations. This multidisciplinary approach ensures appropriate management of both the acute orbital and intracranial complications.

Zhang HM, Feng XH, Lu C, Hu WJ. [Effect of severe periodontitis of maxillary molars on the maxillary sinus and the treatment principles of periodontitis related maxillary sinusitis]. *Zhonghua Kou Qiang Yi Xue Za Zhi*. 2024 Nov 9;59(11):1162-1167. Chinese. doi: 10.3760/cma.j.cn112144-20240421-00161. PMID: 39472098. <https://pubmed.ncbi.nlm.nih.gov/39472098/>

ABSTRACT

Maxillary sinus is located in the maxilla bone with the largest volume in all sinuses and is closest to the roots of maxillary posterior teeth, especially the mesiobuccal root of the maxillary second molar. The thickness of the normal maxillary sinus mucosa is about 1 mm. When stimulated or infected, it shows thickening of the mucosa. Periodontitis is one of the most common oral diseases in human beings, and the complex root anatomy of the maxillary molars aggravates the difficulty of inflammation control. Severe periodontitis of maxillary molars without effective treatment can affect the maxillary sinus, increasing the possibility of the mucosa thickening, and is also one of the reasons for the occurrence of odontogenic maxillary sinusitis (OMS). There are many different schemes for the treatment of OMS caused by severe periodontitis of maxillary molars. Extraction of teeth with severe periodontal disease without retention value or successful periodontal treatment can significantly reduce the thickness of maxillary sinus mucosa. For the patients with uncontrollable sinusitis by using drug treatment and eliminating odontogenic causes, or ones with severe symptoms, periodontal treatment and endoscopic sinus surgery can be combined to effectively control the periodontitis related maxillary sinusitis.

Zhao Y, Huang S, Xu M, Wang Y, Zhang X, Wang K, Lin J. Characteristics and risk factors in odontogenic maxillary sinusitis from different dental infections: a retrospective study based on sinus CT imaging. *BMC Oral Health*. 2025 Feb 26;25(1):308. doi: 10.1186/s12903-025-05690-3. PMID: 40011903; PMID: PMC11866870. <https://pubmed.ncbi.nlm.nih.gov/40011903/>



ABSTRACT

Background: Odontogenic maxillary sinusitis is a common type of maxillary sinusitis, which is secondary to adjacent infectious maxillary dental lesions. However, the prevalence and the different odontogenic risk factors that influence the pathogenesis of odontogenic maxillary sinusitis are not clear. Thus, odontogenic maxillary sinusitis is often overlooked and facing great difficulties of multi-disciplinary treatment decisions for odontogenic maxillary sinusitis. The objective of this study was to analyze the different dental potential risk factors of odontogenic maxillary sinusitis and optimize dental decision-making of odontogenic maxillary sinusitis, which finally provides evidence-based options for multi-disciplinary treatment.

Methods: 968 patients diagnosed with maxillary sinusitis were included based on sinus Computed Tomography, among which 261 patients were categorized as odontogenic maxillary sinusitis. The maxillary sinus and ostiomeatal complex Lund-Mackay score were used to evaluate the severity of sinus infection. Different dental lesions and relevant risk factors that may impact the severity of maxillary sinusitis are systematically evaluated with radiologic data. $P < 0.05$ were considered statistically significant.

Results: The prevalence of odontogenic maxillary sinusitis in maxillary sinusitis patients was 26.96% and in odontogenic lesions present simultaneously with unilaterally maxillary sinusitis reached up to 79.63%. The Lund-Mackay score of odontogenic maxillary sinusitis was significantly higher than that of non-odontogenic maxillary sinusitis. The first molar involved accounts for the highest tooth position in odontogenic lesions. The highest incidence of dental origin was peri-root origin, followed by apical origin and oral-antral fistula. The maxillary sinus Lund-Mackay score was significantly increased when the distance between the maxillary sinus floor and the odontogenic lesion was less than 3.32 mm. When the maxillary sinus floor bone was discontinuous, peri-root origin lesions led to a higher ostiomeatal complex Lund-Mackay score.

Conclusion: Odontogenic maxillary sinusitis has more severe pathogenesis than non-odontogenic maxillary sinusitis and accounts for 26.96% of maxillary sinusitis. The distance between the sinus floor and the odontogenic lesion, and also the type of odontogenic lesions are important risk factors in the severity of odontogenic maxillary sinusitis, which provided new references for guiding the clinical diagnosis and dental treatment of odontogenic maxillary sinusitis.

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Conclusiones
destacadas



Conclusiones destacadas

1. Sinusitis maxilar de origen odontógeno (ODS)
2. Halitosis, microbiota y sentido del olfato
3. Rinitis alérgica y enfermedad periodontal
4. Apnea obstructiva del sueño (AOS) y periodontitis
5. Otitis media/externa y salud gingival
6. Neoplasias nasofaríngeas y periodontitis
7. Tratamientos ORL (radioterapia, cirugía) y efectos sobre periodonto
8. Enjuagues bucales y microbiota/factores de riesgo oncológico

CONCLUSIONES GENERALES

1. SINUSITIS MAXILAR DE ORIGEN ODONTÓGENO (ODS)

Relevancia clínica: La ODS representa hasta el 40% de las sinusitis unilaterales crónicas:

Causas odontológicas: periodontitis avanzada en molares superiores, apicopatías, fracturas radiculares, implantes, elevaciones de seno mal cicatrizadas, perforaciones oroantrales.

Implicaciones diagnósticas: frecuente subdiagnóstico; las imágenes dentales deben leerse también desde una perspectiva ORL.

Referencias clave:

- Mehrotra N et al., 2023 (Curr Allergy Asthma Rep)
- Martín D et al., 2024 (Acta Otorrinolaringol Esp)
- Tonetti MS et al., 2024
- Tröltzsch M et al., 2024

2. HALITOSIS, MICROBIOTA Y SENTIDO DEL OLFATO

Asociación directa entre periodontitis y halitosis persistente.

Impacto del tratamiento periodontal: reducción de halitosis y modificación de la microbiota orofaríngea.

Consecuencias ORL: mejora de disfunción olfativa en algunos casos tras tratamiento periodontal.

Referencias clave:

- Krespi YP et al., 2023 (Oral Dis)
- Kim JS et al., 2024 (Clin Otolaryngol)
- Schertel L et al., 2025 (Int J Dent Hyg)
- Tastan Eroglu M et al., 2025 (Ear Nose Throat J)

3. RINITIS ALÉRGICA Y ENFERMEDAD PERIODONTAL

Asociación sugerida en estudios poblacionales e inflamatorios.



Estudio genético reciente (MR): no se demuestra causalidad genética directa, pero no se descartan vías comunes.

Referencia clave:

- Liu S et al., 2025 (Int J Rheum Dis – MR study)
- Kim et al., 2023 (Korean cohort: asociación inversa)

4. APNEA OBSTRUCTIVA DEL SUEÑO (AOS) Y PERIODONTITIS

Estudios recientes muestran **asociación significativa entre AOS y periodontitis**.

La **respiración bucal crónica**, común en AOS, favorece la inflamación gingival y sequedad oral.

Referencias clave:

- Zárate-García M et al., 2023
- Revisión sistemática 2023 (PMC10929726)

5. OTITIS MEDIA/EXTERNA Y SALUD GINGIVAL

Evidencia emergente: sangrado gingival en adolescentes asociado con mayor incidencia de otitis externa/media.

Posible vínculo inmunológico y microbiológico aún no completamente comprendido.

Referencia clave:

- Abe et al., 2023 (J Clin Med; n = 9.098)

6. NEOPLASIAS NASOFARÍNGEAS Y PERIODONTITIS

Estudio chino sugiere **riesgo aumentado de carcinoma nasofaríngeo** en pacientes con mala higiene oral y disbiosis asociada a periodontitis (*Leptotrichia wadei*).

Importancia del microbioma oral como marcador de riesgo.

Referencia clave:

- Zhang H et al., 2023 (Cancer Med; PMC10058307)

7. TRATAMIENTOS ORL (RADIOTERAPIA, CIRUGÍA) Y EFECTOS SOBRE PERIODONTO

Radioterapia de cabeza y cuello genera cambios adversos en encía, saliva y hueso alveolar.

Importancia de **evaluación y tratamiento periodontal previo** a radioterapia.

Referencias clave:

- Vissink A et al., 2015 (Head Neck)
- Horiot JC et al., estudios sobre osteorradionecrosis

8. ENJUAGUES BUCALES Y MICROBIOTA/FACTORES DE RIESGO ONCOLÓGICO

Uso regular de colutorios alcohólicos como Listerine® puede alterar la microbiota orofaríngea, favoreciendo especies relacionadas con enfermedad periodontal y cáncer.

Aún sin consenso sobre su efecto carcinogénico directo.

Referencias clave:

- Laumen JGE et al., 2024 (J Med Microbiol)
- Madawana AM et al., 2025 (Cureus – Metaanálisis)
- Aceves Argemí R et al., 2020 (J Evid Based Dent Pract)


CONCLUSIONES GENERALES

La **colaboración entre ORL y Odontología** es esencial para diagnosticar correctamente patologías cruzadas, como sinusitis crónica odontógena o halitosis de origen periodontal.

Se sugiere realizar **cribados periodontales en pacientes ORL** con enfermedades respiratorias altas recurrentes, AOS o antes de radioterapia.

Aún hay **lagunas de investigación** en áreas como otitis media, rinitis crónica y cáncer nasofaríngeo, donde la enfermedad periodontal podría tener un papel más importante del que se reconoce clínicamente.

03

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03

Conclusiones destacadas
individuales



Conclusiones destacadas individuales

1. Abe et al., 2020
2. Abe et al., 2020
3. Abou-Bakr et al., 2025
4. Alrmali & Wang, 2024
5. AlRowis et al., 2023
6. Arango Jiménez et al., 2023
7. Bianchi et al., 2024
8. Brandt et al., 2025
9. Byun et al., 2020
10. Carr & Aslam-Pervez, 2022
11. Chiapasco & Tommasato, 2024
12. Craig, 2022
13. Craig et al., 2023
14. Craig et al., 2024
15. Douglas et al., 2022
16. Florian-Tirado et al., 2024
17. Gufran et al., 2022
18. Hotta et al., 2024
19. Kabak et al., 2024
20. Kassim et al., 2015
21. Keller et al., 2013
22. Kheiri et al., 2025
23. Kim et al., 2025
24. Laumen et al., 2024
25. Lee et al., 2025
26. Lembo et al., 2021
27. Lin et al., 2024
28. Liu QY et al., 2023
29. Liu S et al., 2025
30. Maniaci et al., 2024
31. Mukherjee & Galgali, 2021
32. Mustakim et al., 2023
33. Plummer et al., 2022
34. Rao et al., 2024
35. Riekki et al., 2025
36. Saibene et al., 2021
37. Saibene et al., 2024
38. Scaini et al., 2024
39. Schertel Cassiano et al., 2025
40. Schertel Cassiano et al., 2024
41. Schertel Cassiano et al., 2024
42. Schilder et al., 2016
43. Silva et al., 2024
44. Sun et al., 2025
45. Tastan Eroglu et al., 2025
46. Tonetti, 2024
47. Tröltzsch, 2024
48. Wu et al., 2023
49. Wuokko-Landén et al., 2024
50. Yu et al., 2024
51. Zhang et al., 2024
52. Zhao et al., 2025

ABE ET AL., 2020 – GUM BLEEDING AND SYSTEMIC DISEASES

<https://pubmed.ncbi.nlm.nih.gov/32560147/>

En una muestra de 9.098 estudiantes menores de 20 años, el sangrado gingival habitual al cepillarse se asoció de forma significativa con mayor incidencia de otitis media/externa (OR 1.69; p = 0.003) y asma/asma variante (OR 1.30; p = 0.003). El estudio refuerza el vínculo entre enfermedades periodontales y patologías respiratorias y ORL en adolescentes.

ABE ET AL., 2020 – MALOCLUSIÓN Y PATOLOGÍAS SISTÉMICAS

<https://pubmed.ncbi.nlm.nih.gov/32664631/>

Solo un 2,14 % de los estudiantes (n = 195) reportaron conciencia de maloclusión, pero estos presentaron tasas significativamente más altas de rinitis alérgica (OR 2.18), asma (OR 1.84) y arritmias (OR 2.80). Se plantea un posible vínculo entre alteraciones oclusales y ciertas condiciones sistémicas en jóvenes.

ABOU-BAKR ET AL., 2025 – PERIODONTITIS TRAS RADIOTERAPIA EN CÁNCER DE CABEZA/CUELLO

<https://pubmed.ncbi.nlm.nih.gov/40604898/>

El 95 % de los pacientes irradiados por cáncer de cabeza y cuello presentaron periodontitis, siendo el estadio IV el más frecuente (39 %). La gravedad se correlacionó positivamente con la dosis de radiación, el índice de placa y la sequedad oral, pero no con el número de fracciones. Se destaca la necesidad de vigilancia periodontal en estos pacientes.

ALRMALI & WANG, 2024 – FISIOPATOLOGÍA DE LA SINUSITIS ODONTÓGENA

<https://pubmed.ncbi.nlm.nih.gov/39155170/>

Describe cómo complicaciones quirúrgicas orales (comunicaciones oroantrales, injertos, implantes) pueden inducir sinusitis odontógena. Se revisan mecanismos poco explorados como la infección de injertos o la penetración de implantes en el seno maxilar. Refuerza la necesidad de coordinación ORL-odontología.



ALROWIS ET AL., 2023 – PERIODONTITIS Y SINUSITIS MAXILAR (CBCT)

<https://pubmed.ncbi.nlm.nih.gov/38084169/>

En 415 estudios CBCT se observó un aumento significativo del engrosamiento mucoso sinusal en pacientes con pérdida ósea alveolar moderada o severa (OR 1.8; p = 0.03). La prevalencia fue mayor en varones (OR 2.2). Se recomienda evaluar salud periodontal en casos de sinusitis unilateral.

ARANGO JIMÉNEZ ET AL., 2023 – APNEA DEL SUEÑO Y PERIODONTITIS

<https://pubmed.ncbi.nlm.nih.gov/36800028/>

Aunque no se halló asociación estadística directa entre apnea obstructiva del sueño (AOS) y periodontitis (p = 0.290), los pacientes con periodontitis mostraron más casos de AOS severa. Se identificaron como factores locales asociados el uso de prótesis removibles y resinas mal adaptadas.

Bianchi et al., 2024 – Revisión sistemática sobre AOS y periodontitis

<https://pubmed.ncbi.nlm.nih.gov/38476714/>

De 14 estudios incluidos, 11 mostraron asociación positiva entre AOS y periodontitis. Se identifican como mecanismos comunes la inflamación sistémica, respiración bucal y comorbilidades compartidas. No se estableció causalidad. Se necesitan estudios longitudinales mejor estandarizados.

BRANDT ET AL., 2025 – BIOMARCADORES MMP-8 Y MMP-9 TRAS RADIOTERAPIA

<https://pubmed.ncbi.nlm.nih.gov/40545647/>

En pacientes con cáncer de cabeza y cuello, la radioterapia incrementó significativamente los niveles de aMMP-8, tMMP-8 y aMMP-9, biomarcadores asociados a progresión de periodontitis. No se alteró la actividad de proteasas bacterianas. Se sugiere que los cambios observados son de origen tisular.

BYUN ET AL., 2020 – RINOSINUSITIS CRÓNICA Y PERIODONTITIS

<https://pubmed.ncbi.nlm.nih.gov/32325855/>

En una cohorte coreana de más de 29.000 pacientes, los diagnosticados con rinosinusitis crónica presentaron mayor incidencia de periodontitis en años posteriores, especialmente hombres mayores de 40 años. El estudio sugiere una posible relación longitudinal entre ambas patologías.

CARR & ASLAM-PERVEZ, 2022 – ENJUAGUES CON ALCOHOL Y RIESGO DE CÁNCER ORAL

<https://pubmed.ncbi.nlm.nih.gov/35338325/>

La revisión no encontró evidencia de que el uso aislado de colutorios con alcohol aumente el riesgo de cáncer oral. No obstante, el riesgo puede incrementarse si existen factores como tabaquismo, consumo de alcohol, uso muy frecuente (>3 veces/día) o prolongado (>35 años).

Chiapasco & Tommasato, 2024

<https://pubmed.ncbi.nlm.nih.gov/39214737/>

Se revisa el manejo de complicaciones quirúrgicas orales como fístulas oroantrales, implantes desplazados o protuyentes al seno y injertos infectados. Se destaca la necesidad de un enfoque multidisciplinar (cirujano oral y ORL) para abordar correctamente la sinusitis odontógena asociada.

CRAIG, 2022 – REVISIÓN DE SINUSITIS ODONTÓGENA (ODS)

<https://pubmed.ncbi.nlm.nih.gov/35619928/>

La ODS es más común de lo que se pensaba y está infrarrepresentada. Se presenta típicamente de forma unilateral y requiere manejo conjunto odontólogo-ORL. El tratamiento dental aislado no siempre resuelve la infección sinusal. Se recomiendan estudios y abordaje combinado según síntomas y patología tratable.

CRAIG ET AL., 2023 – ENDOTIPO INFLAMATORIO DE LA ODS

<https://pubmed.ncbi.nlm.nih.gov/36308740/>

Análisis de mucosa sinusal muestra que la ODS se asocia a una respuesta inmunitaria innata y Th1, con aumento de IFN γ , TNF α , IL-6, IL-8, IL-10, IL-27 y CXCL9. No hay activación Th17. Estos perfiles podrían influir en el manejo futuro de la ODS.



CRAIG ET AL., 2024 – MANEJO DE LA SINUSITIS EN ODS

<https://pubmed.ncbi.nlm.nih.gov/39428206/>

El tratamiento efectivo de la sinusitis en ODS requiere abordar tanto la patología dental como la infección sinusal. La cirugía endoscópica se reserva para casos complicados o con alta carga de síntomas. En más del 90 % de los casos tratados adecuadamente se logra resolución completa.

DOUGLAS ET AL., 2022 – COMPLICACIONES EXTRA-SINUSALES OPERADAS

<https://pubmed.ncbi.nlm.nih.gov/35876310/>

ODS fue la causa más común (40 %) de complicaciones infecciosas operadas como orbitarias, óseas e intracraneales. El 100 % de estos casos presentaron opacificación unilateral del seno maxilar en TC. No se realizaron tratamientos dentales durante la hospitalización. Refuerza la necesidad de sospechar ODS ante complicaciones graves.

FLORIAN-TIRADO ET AL., 2024 – APNEA DEL SUEÑO Y PERIODONTITIS

<https://pubmed.ncbi.nlm.nih.gov/38794941/>

Estudio en pacientes peruanos en consulta ORL mostró una asociación significativa entre periodontitis y alto riesgo de apnea obstructiva del sueño (STOP-BANG, $p = 0.000$; $rs = 0.527$). También se halló asociación con DM2 ($p = 0.028$) y asma ($p = 0.017$), pero no con edad ni sexo.

Gufran et al., 2022 – Periodontitis y CRS por CBCT (Lund-Mackay)

<https://pubmed.ncbi.nlm.nih.gov/36292408/>

Aunque el análisis inicial no mostró asociación entre periodontitis y rinosinusitis crónica (CRS), el modelo multivariable incluyó pérdida ósea como factor asociado. El género masculino fue el único predictor significativo constante en todas las comparaciones.

HOTTA ET AL., 2024 – FÍSTULA OROANTRAL Y ELEVACIÓN SINUSAL SIMULTÁNEA

<https://pubmed.ncbi.nlm.nih.gov/39360465/>

Caso clínico exitoso de cierre de fístula oroantral y elevación sinusal lateral para colocar implantes. A los

2 años, los implantes estaban en buen estado y el defecto completamente cerrado. Ilustra la posibilidad de manejo quirúrgico combinado en un solo acto operatorio.

KABAK ET AL., 2024 – SINUSITIS MAXILAR POR IMPLANTE DESPLAZADO

<https://pubmed.ncbi.nlm.nih.gov/38506025/>

Caso ruso de sinusitis crónica provocada por implante con fístula oroantral. Se realizó cirugía para cerrar la comunicación y extraer el implante completamente alojado en el seno. Confirma la importancia del control radiológico posimplante.

Kassim et al., 2015 – Daño periodontal inducido por radioterapia

<https://pubmed.ncbi.nlm.nih.gov/26312083/>

La radioterapia puede dañar directamente los tejidos periodontales por su radiosensibilidad. La severidad depende de la dosis. Se destaca la vulnerabilidad del periodonto frente a tratamientos oncológicos, especialmente si no se ha estabilizado previamente la enfermedad periodontal.

KELLER ET AL., 2013 – RINOSINUSITIS CRÓNICA Y RIESGO DE PERIODONTITIS

<https://pubmed.ncbi.nlm.nih.gov/23666605/>

Estudio de cohorte poblacional en Taiwán (N = 55.128) encontró que los pacientes con rinosinusitis crónica (CRS) tienen un 59 % más riesgo de desarrollar periodontitis crónica a los 5 años (HR 1.59; IC 95 %: 1.52–1.67). Se destaca la necesidad de reforzar la higiene oral en estos pacientes.

KHEIRI ET AL., 2025 – IMPLANTES EN SITIOS CON FÍSTULA OROANTRAL

<https://pubmed.ncbi.nlm.nih.gov/40301851/>

Revisión sistemática de 15 estudios sobre cierre de comunicaciones oroantrales seguido de colocación de implantes. Todos los abordajes fueron exitosos, pero no existe aún un protocolo estándar. Se debe individualizar según características del defecto, salud sinusal y antecedentes médicos.

KIM ET AL., 2025 – ENFERMEDADES SINUSALES ODON-



TÓGENAS CON/SIN IMPLANTES

<https://pubmed.ncbi.nlm.nih.gov/40596631/>

Estudio retrospectivo en 195 pacientes mostró que el tabaquismo, el alcohol y la periodontitis son factores importantes en sinusitis odontógena. La protrusión de implantes dentro del seno fue clave. Se diferencian características clínicas entre sinusitis y "fungal balls" odontógenos.

LAUMEN ET AL., 2024 – LISTERINE Y MICROBIOMA ORO-FARÍNGEO

<https://pubmed.ncbi.nlm.nih.gov/38833520/>

Tras 3 meses de uso diario de Listerine en hombres en PrEP, aumentaron significativamente *Fusobacterium nucleatum* y *Streptococcus anginosus*, bacterias vinculadas a enfermedades periodontales y cánceres digestivos. Se sugiere precaución en el uso prolongado.

LEE ET AL., 2025 – IMPLANTES DESPLAZADOS AL SENO MAXILAR

<https://pubmed.ncbi.nlm.nih.gov/40224111/>

Estudio en 14 casos mostró mayor opacificación y engrosamiento del seno si el implante se desplazó tras carga funcional o permaneció más tiempo dentro del seno. El momento del desplazamiento influye directamente en los cambios sinusales. Se destaca la importancia de una preparación adecuada del sitio.

LEMBO ET AL., 2021 – APNEA DEL SUEÑO Y PERIODONTITIS (REVISIÓN SISTEMÁTICA)

<https://pubmed.ncbi.nlm.nih.gov/34205812/>

Incluye 10 estudios (43.122 pacientes). Aunque hay heterogeneidad metodológica, se sugiere una posible asociación entre apnea obstructiva del sueño (AOS) y periodontitis. Faltan estudios que usen clasificaciones periodontales y de AOS estandarizadas para confirmar causalidad.

LIN ET AL., 2024 – CONSENSO EXPERTO EN SINUSITIS MAXILAR ODONTÓGENA (OMS)

<https://pubmed.ncbi.nlm.nih.gov/38302479/>

Propuesta de protocolo diagnóstico y terapéutico para la OMS, destacando su resistencia al tratamiento convencional y la necesidad de cooperación estrecha entre ORL y odontología. El consenso aboga por estandarizar manejo y aumentar la visibilidad académica del problema.

LIU QY ET AL., 2023 – HIGIENE ORAL Y CÁNCER NASO-FARÍNGEO

<https://pubmed.ncbi.nlm.nih.gov/36985292/>

Estudio caso-control en 410 personas mostró que la mala higiene oral aumenta el riesgo de cáncer nasofaríngeo (OR = 1.54). Este efecto fue mediado por cambios en el microbioma oral, especialmente por la abundancia de *Leptotrichia wadei* y *Solobacterium*. Destaca la importancia del microbioma como puente entre higiene y cáncer.

LIU S ET AL., 2025 – PERIODONTITIS Y RINITIS ALÉRGICA (ALEATORIZACIÓN MENDELIANA)

<https://pubmed.ncbi.nlm.nih.gov/39865615/>

Estudio genético no encontró evidencia causal bidireccional entre periodontitis y rinitis alérgica (OR = 0.233; p = 0.131). Las asociaciones observadas podrían deberse a vías inflamatorias comunes. Se recomienda investigar más allá de la predisposición genética.

MANIACI ET AL., 2024 – IMPLICACIONES ORALES DE LA APNEA DEL SUEÑO

<https://pubmed.ncbi.nlm.nih.gov/39061956/>

Revisión narrativa destaca los efectos de la AOS sobre la salud oral: bruxismo, sequedad bucal, periodontitis, disfunción de ATM, cambios palatinos y alteraciones en la oclusión. Se refuerza la necesidad de integrar a los dentistas en el manejo de estos pacientes desde fases tempranas.

MUKHERJEE & GALGALI, 2021 – APNEA DEL SUEÑO Y PERIODONTITIS

<https://pubmed.ncbi.nlm.nih.gov/34269236/>

Estudio transversal en 250 pacientes mostró una correlación positiva moderada y significativa entre riesgo de apnea del sueño (medido por STOP-BANG) y parámetros periodontales como PPD (r = 0.58) y



CAL ($r = 0.55$). Edad, hipertensión y obesidad se asociaron tanto con apnea como con periodontitis. Los hombres presentaron mayor riesgo.

MUSTAKIM ET AL., 2023 – REHABILITACIÓN CON IMPLANTES EN CASOS DE FÍSTULA OROANTRAL Y SINUSITIS

<https://pubmed.ncbi.nlm.nih.gov/36608090/>

Serie de casos con cierre quirúrgico de fístulas oroantrales asociadas a sinusitis maxilar tras implantes mal posicionados. Se realizó cirugía endoscópica modificada y posterior colocación de implantes con buenos resultados. Se aportan recomendaciones técnicas para casos complejos.

PLUMMER ET AL., 2022 – BIOTÈNE Y LISTERINE EN MICROBIOTA OROFARÍNGEA

<https://pubmed.ncbi.nlm.nih.gov/35019769/>

Estudio en 153 hombres demostró que el uso diario de Biotène redujo Streptococcus y Leptotrichia, mientras que Listerine no alteró significativamente la microbiota orofaríngea. Ambos colutorios mostraron efecto mínimo a largo plazo sobre la composición bacteriana, aunque se recomienda cautela.

RAO ET AL., 2024 – ENJUAGUES CON ALCOHOL Y CÁNCER ORAL

<https://pubmed.ncbi.nlm.nih.gov/39239449/>

Aunque el uso de enjuagues con alcohol se ha asociado con posibles riesgos oncológicos, los estudios existentes presentan resultados inconclusos debido a dificultades para cuantificar frecuencia y patrón de uso. No hay evidencia suficiente para confirmar una relación causal con cáncer oral.

RIEKKI ET AL., 2025 – CBCT Y HALLAZGOS ODONTÓGENOS EN SENOS

<https://pubmed.ncbi.nlm.nih.gov/40457876/>

Estudio con 212 CBCT mostró que el contacto radicular con el seno maxilar fue el único hallazgo odontológico asociado significativamente con engrosamiento mucoso, quistes de retención y opacificación. Otros factores como caries, implantes o pérdida ósea no se asociaron a patología sinusal.

SAIBENE ET AL., 2021 – COOPERACIÓN ORL-ODONTOLÓGICA EN SINUSITIS ODONTÓGENA

<https://pubmed.ncbi.nlm.nih.gov/34060527/>

Revisión extensa sobre múltiples causas de sinusitis odontógena, incluyendo enfermedad periodontal, extracciones, implantes y osteonecrosis. Se enfatiza la necesidad de una colaboración sistemática entre ORL y odontólogos para el diagnóstico preciso y la planificación terapéutica adecuada.

SAIBENE ET AL., 2024 – EVALUACIÓN DE LLMS (CHAT-GPT) EN SINUSITIS ODONTÓGENA

<https://pubmed.ncbi.nlm.nih.gov/38189967/>

Evaluación de ChatGPT-3.5 y 4 en cinco escenarios clínicos simulados de ODS. ChatGPT-4 tuvo menor nivel de desacuerdo con expertos, aunque persistieron discrepancias clínicas importantes. Concluyen que los LLM aún no son fiables para decisiones clínicas complejas, pero tienen potencial como soporte.

SCAINI ET AL., 2024 – DIAGNÓSTICO DE COMPLICACIONES QUIRÚRGICAS ORALES EN ODS

<https://pubmed.ncbi.nlm.nih.gov/39214738/>

Se revisan las complicaciones quirúrgicas que originan ODS: comunicaciones oroantrales, implantes desplazados o infectados. Se recomienda una evaluación clínica e imagenológica detallada, y la colaboración con ORL para una correcta identificación y resolución del foco infeccioso.

SCHERTEL CASSIANO ET AL., 2025 – PERIODONTITIS E HIPO/ANOSMIA (CLÍNICO)

<https://pubmed.ncbi.nlm.nih.gov/38888002/>

En 198 adultos daneses, la periodontitis se asoció con una reducción significativa en la función olfativa total (coeficiente estandarizado -0.264), afectando umbral, discriminación e identificación. Se refuerza la relación entre inflamación periodontal y deterioro sensorial nasal.

SCHERTEL CASSIANO ET AL., 2024 – PERIODONTITIS Y ALTERACIÓN DEL GUSTO Y OLFATO (AUTOINFORME)



<https://pubmed.ncbi.nlm.nih.gov/37114436/>

Encuesta en tres universidades (n = 1239) mostró que quienes reportaron periodontitis tenían mayor riesgo de disgeusia (OR 1.56) y anosmia (OR 1.53). La halitosis mediaba parte del efecto. Se apunta a la influencia indirecta de la periodontitis sobre los sentidos a través de compuestos volátiles.

SCHERTEL CASSIANO ET AL., 2024 – PERIODONTITIS Y ALTERACIÓN DEL GUSTO SALADO

<https://pubmed.ncbi.nlm.nih.gov/38566452/>

Análisis NHANES (n = 2373) evidenció que la xerostomía y la edentulía aumentan significativamente la discapacidad para percibir el sabor salado, sobre todo en mayores de 60 años. Se destaca el papel del estado oral en la percepción gustativa, con implicaciones para enfermedades sistémicas como la hipertensión.

SCHILDER ET AL., 2016 – OTITIS MEDIA (NATURE REVIEWS)

<https://pubmed.ncbi.nlm.nih.gov/27604644/>

La otitis media incluye tres entidades: aguda (AOM), con efusión (OME) y crónica supurativa (CSOM). Es común en niños y puede generar secuelas auditivas. La AOM suele ser viral o bacteriana tras resfriados. El tratamiento es sintomático, reservando antibióticos para casos severos. OME requiere vigilancia y tubos de ventilación si hay pérdida auditiva. La vacunación y las guías clínicas han reducido su incidencia, pero sigue siendo una causa frecuente de consulta y cirugía.

SILVA ET AL., 2024 – ENDODONCIA Y ODS [HTTPS://PUB-MED.NCBI.NLM.NIH.GOV/39089983/](https://pubmed.ncbi.nlm.nih.gov/39089983/)

Las infecciones endodónticas son una causa frecuente de sinusitis odontógena (ODS), especialmente por la cercanía anatómica entre ápices radiculares y el seno maxilar. El artículo revisa los factores anatómicos, microbianos e inmunológicos implicados, subrayando la importancia de un enfoque integral en el diagnóstico y manejo.

SUN ET AL., 2025 – ABSCESO CEREBRAL POR P. GINGIVALIS Y S. CONSTELLATUS

<https://pubmed.ncbi.nlm.nih.gov/40242593/>

Caso clínico de un varón de 70 años con absceso cerebral causado por infección periodontal. El cultivo identificó a *P. gingivalis* y *S. constellatus*. Refuerza el potencial riesgo sistémico grave de infecciones periodontales avanzadas y la importancia de su prevención.

TASTAN EROGLU ET AL., 2025 – TERAPIA PERIODONTAL Y SENTIDOS

<https://pubmed.ncbi.nlm.nih.gov/40022178/>

Estudio prospectivo en 183 pacientes muestra que la terapia periodontal no quirúrgica mejora significativamente la percepción del gusto, el olfato y reduce la halitosis. Los pacientes con periodontitis tenían peor percepción inicial. Mejores hábitos de higiene oral influyen directamente en estos sentidos.

TONETTI, 2024 – PERIODONTITIS COMO CAUSA DE ODS

<https://pubmed.ncbi.nlm.nih.gov/39227245/>

La periodontitis avanzada (estadio III/IV) puede provocar mucositis del seno maxilar o sinusitis purulenta. Aunque menos común que otras causas dentales, debe considerarse en el diagnóstico diferencial de ODS. El tratamiento periodontal efectivo permite conservar dientes y evitar progresión.

TRÖLTZSCH, 2024 – EPIDEMIOLOGÍA DE LA ODS

<https://pubmed.ncbi.nlm.nih.gov/39142997/>

ODS representa entre el 25–40% de los casos de sinusitis maxilar, aunque su prevalencia real es incierta por falta de códigos específicos. Las causas más comunes son periodontitis apical, fístulas oroantrales postextracción, implantes complicados y quistes infectados.

WU ET AL., 2023 – MICROBIOMA EN ODS

<https://pubmed.ncbi.nlm.nih.gov/37516855/>

Estudio con 16S rRNA demostró que pacientes con ODS tienen una microbiota oral y nasal dominada por *Fusobacterium*, *Porphyromonas* y *Prevotella*, distinta a controles. Se identificó disbiosis y menor conectividad microbiana, lo que sugiere una influencia cruzada entre boca y nariz.



WUOKKO-LANDÉN ET AL., 2024 – ERRORES EN INFORMES DE TAC/CBC

<https://pubmed.ncbi.nlm.nih.gov/38687757/>

En 300 informes de sinusitis, los hallazgos dentales relevantes como periodontitis apical y pérdida ósea severa fueron frecuentemente omitidos. Se recomienda evaluación estructurada de la dentición en informes de imagen para mejorar el diagnóstico de ODS.

YU ET AL., 2024 – ODS COMPLICADA CON EXTENSIÓN EXTRASINUSAL

<https://pubmed.ncbi.nlm.nih.gov/39048507/>

La ODS puede extenderse a órbita o cerebro, provocando abscesos. El artículo subraya la necesidad de sospecha clínica e imagen temprana, con evaluación dental y consultas multidisciplinarias con ORL, oftalmología y neurocirugía para prevenir complicaciones.

ZHANG ET AL., 2024 – PERIODONTITIS SEVERA Y SINUSITIS MAXILAR

<https://pubmed.ncbi.nlm.nih.gov/39472098/>

La periodontitis severa en molares superiores puede provocar engrosamiento de la mucosa sinusal y sinusitis. Se recomienda extracción de dientes sin valor restaurador o tratamiento combinado periodontal-endoscópico si persiste la infección sinusal.

ZHAO ET AL., 2025 – FACTORES DE RIESGO EN ODS (ESTUDIO EN 968 PACIENTES)

<https://pubmed.ncbi.nlm.nih.gov/40011903/>

La ODS representó el 26,96% de los casos de sinusitis maxilar. Los principales factores de riesgo fueron lesiones periapicales, fistulas oroantrales y distancia <3,3 mm entre la raíz dental y el suelo del seno. Se propone una clasificación basada en severidad y riesgo radiológico.

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Preguntas y
Respuestas



Preguntas y respuestas

¿QUÉ RELACIÓN HAY ENTRE LAS MUELAS SUPERIORES Y LA SINUSITIS?

“Las raíces de los molares superiores están muy cerca del suelo del seno maxilar. Cuando hay infecciones crónicas —caries profundas, periodontitis o incluso implantes mal posicionados—, pueden provocar sinusitis que no mejoran con tratamientos nasales. En realidad, el foco está en la boca.”

¿PUEDE UN IMPLANTE DENTAL PERFORAR EL SENO MAXILAR?

“Sí, si no se planifica bien. A veces el implante atraviesa la membrana del seno sin dar síntomas al principio, pero con el tiempo puede aparecer infección, presión facial o secreción nasal. Es una complicación que requiere coordinación entre dentistas y otorrinos.”

¿POR QUÉ SE CONFUNDEN A VECES LOS SÍNTOMAS NASALES CON LOS DENTALES?

“Porque las estructuras están muy próximas y comparten inervación. Un dolor facial o una congestión pueden parecer sinusitis, pero tener origen dental. Por eso, cuando un cuadro no mejora, es clave revisar también la boca.”

¿LAS CARIES O ENCÍAS INFLAMADAS PUEDEN AFECTAR AL OÍDO?

“Sí, especialmente en niños. Las bacterias de la boca pueden viajar hacia la nasofaringe y de ahí al oído medio a través de la trompa de Eustaquio. Esto puede favorecer otitis de repetición o inflamaciones crónicas. Si hay infecciones en la boca, pueden estar perpetuando el problema.”

¿HAY PACIENTES ADULTOS CON PROBLEMAS ORL DE ORIGEN BUCAL?

“También. Personas con inmunosupresión o hábitos como respiración oral pueden tener alteraciones de la flora que afectan a oído, garganta o nariz. La boca es una puerta de entrada que a veces descuidamos.”

¿PUEDE LA SALUD BUCAL INFLUIR EN LOS RONQUIDOS O LAS APNEAS?

“Sí. La respiración oral mantenida reseca la mucosa, altera la flora y favorece infecciones. Además, una boca inflamada puede empeorar la calidad del sueño. Y en pacientes con apnea que usan CPAP, es común ver sequedad extrema, candidiasis o sensibilidad dental.”

¿Y EL MAL ALIENTO? ¿PUEDE VENIR DEL OÍDO O LA GARGANTA?

“A veces sí, pero lo más frecuente es que la halitosis venga de la lengua o las encías. Una sinusitis crónica con pus puede contribuir, pero casi siempre el origen está en la boca. Una limpieza profesional puede marcar la diferencia.”

¿POR QUÉ SE PIERDE EL GUSTO O EL OLFATO EN ALGUNOS PROBLEMAS BUCALES?

“La inflamación crónica o los cambios en la flora oral pueden alterar la percepción del gusto. Además, el mal aliento persistente puede interferir con el olfato. Tras una limpieza profunda de encías, muchos pacientes recuperan sensaciones que creían perdidas.”

¿ES NORMAL SANGRAR POR NARIZ Y ENCÍAS A LA VEZ?

“Puede pasar. A veces por fragilidad capilar o déficit de vitaminas. Si el paciente sangra fácilmente al sonarse y también al cepillarse, conviene revisar su estado general, no solo la nariz o la boca por separado.”

¿UN ABSCESO DENTAL PUEDE PROVOCAR FIEBRE O SÍNTOMAS RESPIRATORIOS?

“Sí. Un absceso mal controlado puede extenderse a zonas vecinas, provocar dolor facial, fiebre, incluso dificultad respiratoria si invade el espacio perimaxilar. En esos casos, es vital que otorrinos y dentistas trabajen coordinados.”

¿LOS PROBLEMAS DE ENCÍAS PUEDEN COMPLICAR UNA AMIGDALITIS?

“Sí. La boca con periodontitis es una reserva de bacterias. Si hay una infección de garganta, ese exceso



bacteriano puede agravarla. Además, la inflamación de las encías debilita la respuesta inmunológica local.”

¿QUÉ SIGNOS DEBE DETECTAR UN OTORRINO PARA DERIVAR AL DENTISTA?

“Movilidad dental, sangrado al tocar encías, halitosis crónica, dolor en los molares superiores o antecedentes de implantes o extracciones recientes. Todo eso puede indicar que hay un foco oral afectando al territorio ORL.”

¿QUÉ PAPEL TIENEN LOS ODONTÓLOGOS EN RINITIS O SINUSITIS CRÓNICAS?

“Un papel crucial. Muchas rinitis que no mejoran tienen su origen en infecciones dentales. Coordinar con el dentista puede evitar tratamientos inútiles e incluso cirugías innecesarias. El enfoque debe ser conjunto.”

¿PUEDE UNA INFECCIÓN PERIODONTAL AFECTAR AL SENO MAXILAR?

Sí. Las raíces de los molares superiores están en íntimo contacto con el suelo del seno maxilar. Una periodontitis activa puede producir inflamación de la mucosa sinusal, e incluso sinusitis odontógena. Se estima que hasta el 40 % de las sinusitis maxilares tienen origen dental.

¿CÓMO SE DIFERENCIA UNA SINUSITIS NORMAL DE UNA DE ORIGEN DENTAL?

La sinusitis odontógena suele ser unilateral, con síntomas más persistentes, y a menudo se acompaña de infecciones dentales activas, fístulas oroantrales o antecedentes de extracciones. El diagnóstico requiere colaboración entre dentista y otorrino.

¿QUÉ PAPEL TIENE LA PERIODONTITIS EN LA SINUSITIS CRÓNICA?

Es clave. Estudios como los de Zhao (2025) muestran que cuando la infección periodontal está cerca del seno maxilar, el engrosamiento mucoso y la severidad sinusal aumentan, especialmente si hay pérdida ósea importante.

¿LOS IMPLANTES DENTALES TAMBIÉN PUEDEN CAUSAR SINUSITIS?

Sí. Un implante mal posicionado o que atraviesa el suelo del seno puede causar inflamación crónica, infección y necesidad de cirugía. También puede provocar sinusitis tardía, incluso años después de su colocación.

¿PUEDE UNA INFECCIÓN ORAL LLEGAR AL CEREBRO O LA ÓRBITA?

Aunque es poco frecuente, sí. Se han documentado abscesos cerebrales y orbitarios por extensión de infecciones dentales severas a través del seno maxilar. Es un motivo más para no ignorar infecciones bucales persistentes.

¿ESTÁ RELACIONADA LA PERIODONTITIS CON LA PÉRDIDA DEL OLFATO?

Sí. Estudios clínicos recientes confirman que las personas con periodontitis tienen peor umbral olfativo, menor capacidad para identificar olores y más alteraciones sensoriales. Esto puede deberse a la inflamación crónica y a bacterias patógenas que afectan al epitelio olfativo.

¿Y CON EL SENTIDO DEL GUSTO?

También. Se ha demostrado que la periodontitis, especialmente si hay xerostomía o muchas piezas perdidas, puede alterar la percepción del gusto, sobre todo del salado. La buena noticia es que el tratamiento periodontal mejora estas funciones.

¿LA HALITOSIS ES UN SÍNTOMA DE ENFERMEDADES ORL?

Sí, pero en la mayoría de los casos su origen está en la boca: biofilm lingual, bolsas periodontales, caries profundas o restauraciones defectuosas. Solo un pequeño porcentaje es de origen nasal, sinusal o digestivo.

¿LA PERIODONTITIS PUEDE INFLUIR EN EL OÍDO O PROVOCAR OTITIS?

En niños o inmunodeprimidos, las infecciones nasofaríngeas pueden conectar con el oído medio. Sin embargo, no hay evidencia clara en adultos sanos de que la periodontitis aumente el riesgo de otitis.



¿SE RECOMIENDA ENJUAGUE BUCAL A LOS PACIENTES ORL?

Depende del tipo y frecuencia. Algunos colutorios como Listerine alteran la microbiota orofaríngea e incrementan bacterias como *Fusobacterium nucleatum*, asociadas a enfermedad periodontal y otras patologías. El uso debe ser puntual y supervisado.

¿EXISTE RELACIÓN ENTRE PERIODONTITIS Y APNEA DEL SUEÑO?

Sí, comparten factores de riesgo como obesidad, edad o hipertensión. Además, se ha encontrado una asociación moderada entre apnea del sueño y pérdida de inserción periodontal, posiblemente por inflamación sistémica crónica.

¿LA BOCA SECA PUEDE INFLUIR EN ESTOS TRASTORNOS?

Totalmente. La respiración bucal por apnea o congestión nasal agrava la sequedad oral, lo que favorece el acúmulo de biofilm, el desarrollo de caries y el empeoramiento de la periodontitis. Es un círculo vicioso que puede y debe romperse.

¿EL TRATAMIENTO PERIODONTAL MEJORA EL SUEÑO O LA CALIDAD RESPIRATORIA?

Indirectamente sí. Al reducir inflamación, halitosis y sequedad, mejora la respiración y el confort del paciente. Además, algunos estudios muestran que el tratamiento periodontal mejora la percepción del gusto y del olfato, lo que repercute en bienestar.

¿QUÉ PRUEBAS AYUDAN A DIAGNOSTICAR SINUSITIS DE ORIGEN DENTAL?

La clave es la imagen: CBCT (TC de haz cónico) permite ver las raíces, la mucosa sinusal y la relación entre ambas. La exploración clínica debe incluir evaluación periodontal y revisión de tratamientos previos (implantes, extracciones, etc.).

¿POR QUÉ SE PASA POR ALTO EL ORIGEN DENTAL DE

MUCHAS SINUSITIS?

Porque en los informes de TC no siempre se describen los hallazgos dentales. Un estudio finlandés reciente mostró que en más del 20 % de los casos se omitieron lesiones periapicales o pérdidas óseas evidentes. Es imprescindible una lectura conjunta con el dentista.

¿ES HABITUAL QUE EL PACIENTE ACUDA PRIMERO AL OTORRINO POR PROBLEMAS QUE TIENEN ORIGEN DENTAL?

Sí. El paciente consulta por congestión, presión o dolor facial, y muchas veces el dentista no ha explorado la zona. La clave está en la sospecha clínica y la coordinación entre especialidades.

¿EL TRATAMIENTO DE UNA SINUSITIS ODONTÓGENA SE INICIA EN EL OTORRINO O EN EL DENTISTA?

Debe ser conjunto. Primero hay que controlar el foco dental: desinfección, tratamiento periodontal o extracción. Si los síntomas persisten, puede requerirse cirugía endoscópica para drenar el seno.

¿QUÉ LE RECOMENDARÍAS A UN PACIENTE CON SINUSITIS CRÓNICA Y ENFERMEDAD PERIODONTAL?

Revisión dental completa, con especial atención a piezas posteriores superiores, implantes y signos de periodontitis. Es importante no cronificar la sinusitis si tiene un origen tratable.

¿QUÉ BENEFICIOS CONCRETOS PUEDE NOTAR EL PACIENTE TRAS EL TRATAMIENTO PERIODONTAL?


Mejora de la congestión nasal, reducción de halitosis, mejor percepción del gusto y del olfato, y en algunos casos disminución de la frecuencia de infecciones respiratorias altas.


¿CÓMO PUEDE COLABORAR UN OTORRINO CON EL DENTISTA EN ESTOS CASOS?

Compartiendo imágenes, haciendo derivaciones cruzadas y estableciendo protocolos conjuntos. Cada vez más publicaciones insisten en que la sinusitis odontógena debe tratarse con enfoque multidisciplinar desde el inicio.



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