

Abstract Selection

Prevalence of post-traumatic stress disorder symptoms in orofacial pain patients

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Objective There is a high comorbidity between symptoms of post-traumatic stress disorder (PTSD) and chronic pain incidence. The objective of this investigation was to determine the prevalence of PTSD symptoms in chronic orofacial pain patients.

Study Design The study included 1478 adult patients (mean age 36.4 + / - 12.7 years) with primary diagnoses of masticatory/cervical muscle pain or temporomandibular joint pain. Patients completed a battery of psychometric questionnaires including a screening for PTSD symptoms. The sample was divided into a PTSD-positive group ($n = 218$, 15%) a PTSD-negative group ($n = 551$, 37%), and a no-stressor group ($n = 709$, 48%) according to stressor incidence and symptom severity.

Results The current prevalence of PTSD symptomatology was considerably higher than that reported in surveys from the general population. Patients in the PTSD-positive symptom group reported significantly higher psychological distress, sleep dysfunction, and pain severity compared to patients in the other groups. Psychological distress as measured by the SCL-90-R reached clinically significant levels only in those patients with PTSD symptomatology.

Conclusions The results of this study performed at a tertiary care center suggest that TMD patients without PTSD symptomatology show low levels of psychological distress, if any. Clinically significant levels of psychological distress are likely indicators for PTSD. PTSD screening should be included as part of a routine psychometric test battery in TMD patients.

Olfactory and sensory attributes of the nose

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The human nasal cavity contains multiple sensory and olfactory structures. The nasal mucosa with its complex innervation detects the danger substances in the air and stimulates the protective reflexes. Healthy olfactory mucosa allows for appreciation of pleasant aromas and food flavors. The olfactory nerve, in concert with the trigeminal nerve, serves as a main interpreter and modulator of chemosensory information. The anatomy of the olfactory neuroepithelium, which occupies only a small portion of the nasal mucosa, is generally well understood, while the presence and distribution of the sensory/tactile receptors in the mucosa of the nasal cavity is still a subject of controversy. The nasal vestibule, lined with skin, contains receptors that can sense noxious stimuli and air-flow. The sensitivity of the nasal mucosa to air-flow still needs further research. Understanding the distribution of the air-flow receptors could help to guide nasal surgery for obstruction.

Bacterial biofilms: do they play a role in chronic sinusitis?

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Although medical and surgical strategies for chronic sinusitis have been greatly refined during the last 2 decades, many patients continue to suffer. Bacterial biofilms are three-dimensional aggregates of bacteria that recently have been shown to play a major role in many chronic infections. There is growing evidence that bacterial biofilms may play a role in some forms of recalcitrant chronic sinusitis that persists despite surgically opened sinus cavities and what seems to be appropriate, culture-directed antibiotic therapy. New directions in therapy aimed at biofilms may provide some success in treatment for patients with chronic sinusitis.

Chronic rhinosinusitis and superantigens

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This article discusses the potential role of bacterial superantigens (SAGs) in chronic rhinosinusitis with nasal polyposis (CRS/NP). First, it briefly describes SAGs, focusing on how they interact with the immune system by binding to T-cell receptors (TCR) and major histocompatibility complex (MHC) class II molecules. Second, it discusses the role of SAGs in other chronic inflammatory diseases. Finally, it presents evidence for the role of SAGs in the pathogenesis and maintenance of CRS/NP focusing on current research and future considerations.

Update on the molecular biology of nasal polyposis

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The definition of CRS with and without nasal polyposis continues to evolve. It may require an understanding of a broader range of etiologies and pathogenesis than bacterial or viral infection. One must know whether the inflammation is of infectious or noninfectious origin. Therapeutic options will include pharmacotherapies and surgery. The pharmacotherapeutic approach will include antibiotics, systemic and topical steroids, possibly antifungals, novel anti-inflammatory therapies such as the use of antibodies directed against inflammatory cytokines and antileukotrienes, and perhaps low-dose macrolide therapy. In the case of massive nasal polyposis, modern surgical techniques will have to be performed before these therapeutic options will be possible. Finally, the use of topical diuretics such as amiloride and furosemide has been studied and the initial responses seem to be encouraging.

Allergy and chronic rhinosinusitis

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The association between chronic rhinosinusitis (CRS) and allergy of the upper respiratory system has been discussed for many years, but much of this discussion has been anecdotal. Although epidemiologic evidence supports the increased prevalence of CRS among patients who have allergic rhinitis, and treatment of upper airway inflammation and allergy has been shown to decrease morbidity in patients who have CRS, but pathophysiologic mechanisms linking the two disease states have not been well elucidated. This article examines data supporting the link between upper

airway allergic disease and CRS. It proposes a frame work for the treatment of CRS, with consideration of managing the allergic inflammation commonly noted in this disease. Finally, it discusses avenues for potential future research in evaluating the comorbidities of allergic inflammation and CRS.

Maximal medical therapy for chronic rhinosinusitis

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Chronic rhinosinusitis (CRS) is widely recognized as one of the most common, if not the most common, chronic disease entities. This article discusses CRS without nasal polyposis. The discussion of maximal medical therapy concentrates on the best available evidence from published clinical trials.

Sinogenic facial pain: diagnosis and management

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Most patients who present to an otorhinolaryngology clinic with facial pain and headaches believe they have sinusitis. There is an increasing awareness that neurologic causes are responsible for a large proportion of patients with headache and facial pain. If facial pain and pressure is the primary symptom, it is unlikely to be caused by sinus disease in the absence of any nasal symptoms or signs. Patients with facial pain who have no objective evidence of sinus disease are unlikely to be helped by surgery. Most patients with pain caused by sinusitis respond to medical therapy.

Office-based procedures in rhinosinusitis

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The availability of nasal endoscopes enables the rhinologist to visualize pathology in the posterior nasal cavity and middle meatus. With limited surgical equipment, the surgeon skilled in local anesthesia can perform biopsies, debridements, polypectomies, and turbinate reductions successfully in the office. With more specialized equipment and powered instrumentation, endoscopic maxillary antrostomies and other limited sinus surgeries become possible. On occasion, the surgeon might perform a limited ethmoidectomy, revise a sphenoidotomy, or remove polyps from within the maxillary sinus. For the properly selected patient, office surgery provides convenience and cost savings by eliminating hospital fees, anesthesia charges and preanesthesia testing. For the busy surgeon, office surgery allows improved efficiency by eliminating travel and anesthesia time.

Anti-inflammatory effects of macrolide antibiotics in the treatment of chronic rhinosinusitis

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Apart from their obvious antibiotic effects, the macrolides have some potentially useful immunomodulatory properties. Which pathway dominates the clinical effect is debatable. Favoring the anti-inflammatory effects are the substantial *in vitro* data and serum concentrations well below minimal inhibitory concentrations for several pathogens. Furthermore, tissue reparative effects are seen in diffuse panbronchiolitis regardless of the presence of *P. aeruginosa*, a pathogen not sensitive to macrolide antibiotics. Clinical studies support the view that prolonged treatment is likely to be beneficial in most patients who have CRS. The evidence concerning CRS is still weak because placebo-controlled trials are missing. One should remember, however, the general lack of placebo-controlled trials even in the more established medical management of CRS. The concern for an increasing incidence of macrolide-resistant bacterial strains must be taken seriously. Therefore the authors advocate repeated nasal cultures during macrolide therapy. It is hoped that the future will bring larger, prospective, randomized, controlled trials that will investigate the efficacy and safety of macrolides in CRS.

Dose response of topical anesthetic on laryngeal neuromuscular electrical transmission

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Objectives Our purpose was to determine the effect of a dose response to decreasing concentrations of topical anesthetic upon laryngeal neuromuscular electrical transmission.

Methods We performed a prospective study at a neurolaryngology referral center. Forty-three patients were divided into 5 groups. Each patient underwent laryngeal electromyography (EMG) of a thyroarytenoid muscle before and 60 seconds after topical laryngotracheal lidocaine hydrochloride, normal saline solution, or nothing was applied. The pretreatment and posttreatment measurements were recorded with the same indwelling EMG electrode. Group 1 ($n = 12$) received 4% lidocaine, group 2 ($n = 9$) received 2% lidocaine, and group 3 ($n = 8$) received 1% lidocaine. Group 4 ($n = 5$) received topical normal saline solution instead of lidocaine. A fifth group (group 5, $n = 9$) had 2 EMG recordings measured, each separated by 60 seconds, without topical anesthetic.

Results Groups 1, 2, and 3 showed significant decreases in the maximum peak-to-peak amplitude of the EMG recording (48.5%, 49.7%, 44.7%, respectively). Groups 4 and 5 failed to show a significant change in peak-to-peak amplitude after 60 seconds. There was no dose response change in EMG with decreasing lidocaine concentrations.

Conclusions All concentrations of lidocaine administered in this study decreased the laryngeal neuromuscular electrical transmission as measured by laryngeal EMG. This group of patients did not exhibit any dose response to anesthetic concentration. This finding is clinically significant for both diagnostic and therapeutic uses of laryngeal EMG preceded by administration of topical anesthetic.