

ORIGINAL STUDY

**ETIOLOGICAL FEATURES OF SUPPURATED CHRONIC
MAXILLARY SINUSITIS**

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ABSTRACT

The maxillary sinusitis, usual and (especially) suppurated chronic, is a frequently met affection in the rhino-sinusal pathology. Therapeutic results of the disease depend on the drainage and antibioterapie technique, but very important is causal therapy. Etiology of chronic maxillary sinusitis effusion is tied nasal loco-regional disease and dental microbial species involved and immunological status of the patient. We study the particular etiology of chronic maxillary sinusitis effusion as a defining element in achieving results requires solving rinogena terapeutice. Etiologia surgical nasal drainage and the elimination of odontogenic infectious outbreak requires the application of these principles dentar. Desi therapeutic problem seems simple, often involved many extremely subtle factors that modify the therapeutic approach.

KEYWORDS: *suppurated chronic maxillary rhino sinusitis, microbial flora, immunological mechanisms, dental infectious areas, anatomical barriers.*

1. Introduction

The suppurated chronic maxillary sinusitis condition lasts from at least 8 weeks up to several months and is characterized by the accumulation of pus in the maxillary sinus (unilateral and bilateral).

More correctly be called chronic maxillary rhino sinusitis effusion (SCMRS) Given that the nasal mucosa is in continuity with the sinus (sinusomeatal unit). In the U.S. frequency of this disease is very high as the fifth most frequent antibiotic prescriptions diagnosis (2% of all antibiotic prescriptions in 2002).

The extent of the phenomenon is not known very well in Europe because there is no precise

epidemiological information. This is due to confusion and diagnoses (e.g. acute viral rhinosinusitis is confused with the trivial hay fever or rhinosinusitis, even suppurated, can be confused with upper respiratory tract infections (URTI) [1, 2]. Data epidemiology of chronic rhinosinusitis with or without nasal polyps are low. It is estimated that the prevalence would still be between 1-16 % of the population [3]. A controversial category represent and fungal rhinosinusitis.

2. Material and Methods

It is estimated that this represents 5-10% in patients diagnosed with chronic rhino sinusitis (CRS)

ENT - Galati conducted a prospective study on a sample of 521 patients with various forms of CSR that required surgical treatment . Of these 56 were fungal rhino sinusitis, meaning 10.7%

3. Results

SCMRS Etiology

Bacterial infections are an important etiology and presumably any SCMRS is an evolutionary form that bacterially over infects AMRS.

Microbial flora is very variate. The most common infections are staphylococcus aureus (36%), staphylococcus coagulazo-negative (20%), streptococcus pneumoniae (17%), aerobes gram-negative (19%) and anaerobes gram-negative (8%) [4-6].

In SCMRS odontogenic microbial species involved are numerous but dental apical region of bacterial types are found highly aggressive [6, 7] . The species identified *Fusobacterium nucleatum*. In of these is about 10 % of cases are identified *Actinomyces israeli* - especially in teeth with previous endodontic treatment (figure 1) .

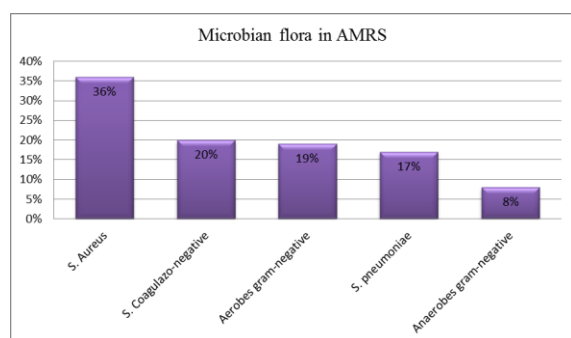


Figure 1. *Microbian flora in AMRS*

Other microbial species identified in 50 % of cases are:

Porphyromonas endodontalis , *Porphyromonas gingivalis*, *Prevotella melaninogenica* , *Prevotella intermedia*, *Streptococcus salivarius*, *Enterococcus faecalis*. *Spirochetes* have also been identified:

Treponema denticola *Treponema oralis* [7] odontogenic maxillary sinusitis represents 10% of SCMRS [8]. Because the maxillary sinus is the superior dental arch relationship with teeth, abscesses are secondary sinus disease molars and superior premolars. Due to this neighborhood, any unexpected dental treatment to these teeth can cause sinus effusion .

Upper dental arch teeth are separated from the maxillary sinus - sinus alveolar septum which has a thickness of 0.5-4 mm. Depending on how thick is this alveolar- sinus tooth apex may protrudes inside the maxillary sinus. However SCMRS incidence is low compared with the high frequency of dental infections, this being due to increased resistance to alveolar- sinus septum is composed of compact bone.

The most common cause of iatrogenic dental SCMRS are accidentally drop tooth fragments in the maxillary sinus during tooth extraction , tooth paste and other materials accidentally introduced by newest maxillary sinus and dental implants. A special case in our study was a patient who developed a very severe form of bone. The bone addition necrotized and destroyed the alveolar septum-sinus invading the maxillary. Only after identifying the true cause was there made a successful therapy. The therapy was surgical and required multiple steps.

An important etiologic factor is the extraradicular. This plaque is represented by live bacterial colonies in periapical lesions .

Sustainability is given by the fact that bacteria are embedded in a mass polysaccharide nutritional and genetic adapted also established that mechanisms leading to osteolysis endodontic bacterial infections are the active immune response.

Specific immune response is immediate (neuropeptide release, vasodilatation, increased vascular permeability) and nonspecific immune response (macrophages and PMN activation and cytokine production) allergy is an important etiologic

factor in SCMRS. In our study found that patients with old allergic rhinitis developed a SCMRS easier and had almost always require surgical treatment. Uses and 61.2% patients were diagnosed with allergic rhinitis and nonallergic rhinitis 38.7% (figures 2 and 3).

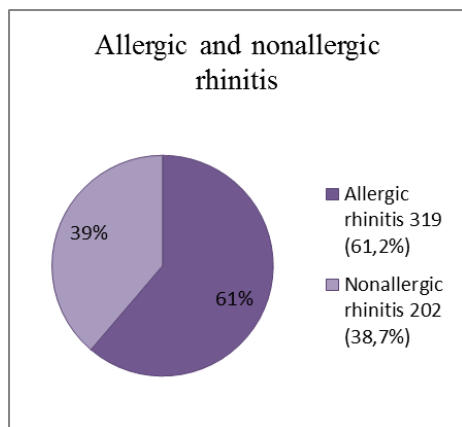


Figure 2. Allergic and no allergic rhinitis

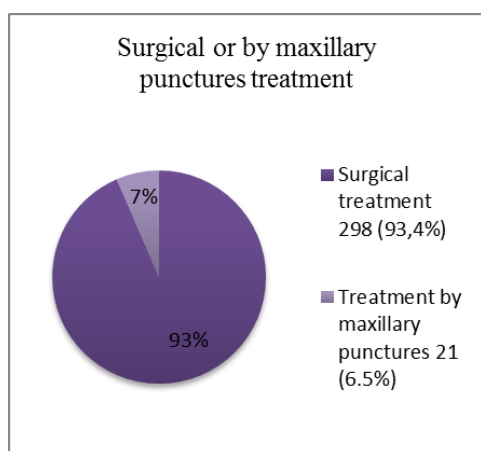


Figure 3. Surgical or by maxillary punctures treatment

Anatomical abnormalities are another cause that can lead to SCMRS. Among them the most frequentesunt: nasal septum deviation and concise bullous. But of cause and effect is statistically questionable. It assumes that any obstruction that influence drainage and ventilation, cause stasis and secondary overgrowth. In our study, only a small

percentage of anatomical abnormalities caused SCMRS. Nasal polyps, obstructive factor can be incriminated as the cause of SCMRS but contribute to superinfection and the fact that polyps are associated with a number of other diseases (asthma, aspirin intolerance, allergic rhinitis, cystic fibrosis, ciliary dysfunction) [7] in our statistics nasal polypos is was seen in 11, 5% of cases as a result of chronic inflammation associated with allergic rhinitis but with nonallergic rhinitis (figures 4 and 5). The specialty literature also cites causes of SCMRS (unidentified by us): Primary ciliary dyskinesia (Kartagener syndrome) and cystic fibrosis [3].

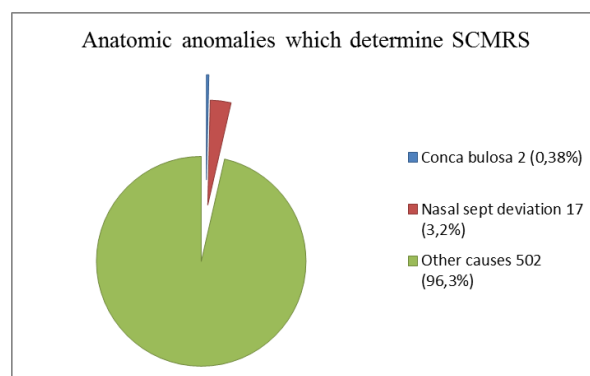


Figure 4. Anatomic anomalies which determine SCMRS

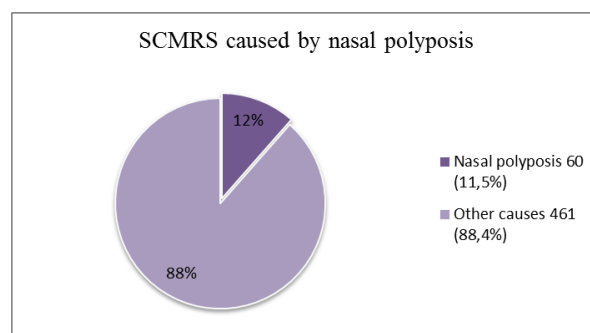


Figure 5. SCMRS caused by nasal polyposis

4. Discussions

SCMRS etiology is far from being accurately recorded in algorithm development. Etiological

factors often overlap or are succeeding during a variable interval time. In these conditions we can talk rather suppurative maxillary syndrome [7].

There are many factors etiologici. Acestia can be divided into extrinsic factors (environmental factors) and intrinsic factors (factors related to patient) [8-10].

By taking average nasal nasal meatus and maxillary sinus was revealed a rich microbial flora other than microbial species found so far [11].

Biofilm plays an important role , especially in SCMRS odontogenic [4,10].

Also, the fungal suprainfections should not be omitted, even though only certain species of fungi produce SCMRS and certain immunological conditions [12].

An important role in appearance plays SCMRS nasal septum deviation and concise bullous these disorders causing ventilation and drainage [4].

Special attention should be given to odontogenic maxillary sinusitis . In this regard will be taken in account their particularities bacterial , microbial associations but dental iatrogenic [7,8].

5. Conclusions

SCMRS etiology is very important because it draws and conduct therapeutic indication.

Identification of microbial agent and leading to an effective antibiotic therapy.

Etiology is performed by paraclinical and clinical mixed strategy then it will analyze subtle pathophysiological mechanisms.

Obstructive etiology must be solved surgically.

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