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MAXILLARY SINUS CYST: REVIEW OF LITERATURE

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ABSTRACT: Maxillary sinus cysts (MSCs) are a common finding during X-ray examinations of the paranasal sinuses (PSC). They make up from 89.5 to 92.7% of all cysts localized in the SNP [1–3]. The frequency of detection of intracranial cysts depends on the imaging method and varies widely - from 1.4 to 35.6% [1], on average, intracranial cysts are detected in 21.6% of those examined [4, 5]. The most informative methods for detecting SNP cysts are computed tomography (CT) and magnetic resonance imaging (MRI), which detect them with approximately the same accuracy [6].

KEYWORDS: library, PubMed/MEDLINE, ScienceDirect, EBSCO, for the period from 2010 to 2024, which were found using the keywords “maxillary sinus cyst, clinical course, treatment".

INTRODUCTION

The aim of the work is to summarize modern publications on diagnostics and treatment tactics in relation to intracranial cysts.

Material and methods. The review used data from publications presented in the information databases eLIBRARY, PubMed/MEDLINE, ScienceDirect, EBSCO, for the period from 2010 to 2024, which were found using the keywords “maxillary sinus cyst, clinical course, treatment". The analysis included original studies on the problem of diagnosis and treatment of maxillary sinus cysts, as well as analytical reviews.

RESULTS

The classification of cysts, which has not lost its relevance today, was proposed by M.I. Kadymova [4]: true or retention cysts; false or cyst-like formations; odontogenic cysts; cysts associated with developmental defects.

In the English-language literature, a distinction is made between secreting cysts (retention cysts) and non-secreting cysts (pseudocysts).

Retention cysts are formed as a result of obstruction of the excretory ducts of the glands of the mucous membrane [7]. Histological examination shows that retention cysts are bilaterally lined with ciliated columnar epithelium; the cyst wall consists of connective tissue with the presence of coarse collagen fibers [9]. On spiral CT (SCT), such cysts appear as round, homogeneous soft

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tissue formations on a broad base, with clear boundaries, without signs of bone destruction, and without connection with the roots of the teeth.

False (lymphectatic) cysts are located intramurally in the mucous membrane and do not have an internal epithelial lining, which is their only histological difference from retention cysts.

Presumable causes of the formation of false cysts are considered to be barotrauma, allergic and inflammatory diseases of the sinuses [3,10]. According to the results of the study by O. Berg et al. [8] revealed a high content of immunoglobulins, complement and antiproteases in aspirates from intramural cysts, which, along with the bacterial microflora present in them, supports the inflammatory theory of their origin; however, the content of immunoglobulin E (IgE) and eosinophils was within normal limits. The identity of the discovered bacterial flora with the microbiota of the oral cavity allowed the authors to suggest that the basis for the formation of intramural cysts is formed by the residual part of the dental layer.

Several prospective comparative studies have examined the associations between sinus cysts and sinus mucosal pathology and drainage disorders. J. Kanagalingam et al. [2] did not find a correlation between the occurrence of intracranial cysts and allergies, asthma, or block of the ostiomeatal complex. The lack of correlation between intracranial cysts and the state of the ostiomeatal complex was confirmed in other studies [3].

However, R. Harar et al. [4] noted that in the presence of a cyst, changes in the sinus mucosa, characteristic of chronic rhinosinusitis, are detected on SCT more often than in its absence (52.7 and 41.3%, respectively). The authors concluded that it is theoretically possible for a cyst to form due to transient obstruction of the ostiomeatal complex with subsequent preservation of the ICP after restoration of its patency.

CONCLUSION

Thus, ICP cysts in most cases are characterized by an asymptomatic course, tend to slow spontaneous regression or remain the same size and, as a rule, do not require surgical treatment. The indication for surgery is the presence of certain symptoms and large size of the cyst, causing irritation of the nerve endings of the sinus mucosa and/or obstruction of the sinus anastomosis from the inside. Endonasal endoscopic approaches in most cases allow one to obtain a good overview of the intracranial cavity and completely remove the cyst. To identify the optimal surgical approach for the removal of intracranial cysts, further studies of the incidence of complications and cyst recurrences when using different approaches are necessary.

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