

## ORIGINAL ARTICLE

# CLINICAL AND MORPHOLOGICAL CORRELATION DEPENDENCIES AND THEIR SIGNIFICANCE IN PATIENTS WITH COMPLICATIONS OF LABORED ERUPTION OF THE LOWER THIRD MOLARS

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## ABSTRACT

**The aim** is to determine the clinical and morphological dependencies, which are important for diagnostics, treatment and prediction of outcomes of pathological processes in the region of the LTM with complicated eruption, as based on the study of histopathological changes of paradental tissue (mucous membrane, walls of retromolar pocket, alveolar bone tissue).

**Materials and methods:** The materials of the study were 34 biopsy specimens of pathologically altered soft tissue and parodontium obtained as a result of pericoronectomy, extraction of the LTM and other surgical interferences performed based on the relevant indications in 28 patients in the region of the LTM with complicated eruption. Morphological and statistical research methods were used.

**Results:** The local pathological processes, which chronologically precede the destructive changes in the hard tissue of a tooth (caries), are developed in patients of both genders with complicated LTM eruption in soft tissue of parodontium and the adjacent bone tissue of the alveolar wall in the majority of cases. As per biopsy examinations, the frequency of the main pathological processes in paradental tissue in case of complicated LTM eruption varies from 25 to 60 % of the number of biopsy specimens and occurs in various combinations in patients with different values of clinical parameters. The correlation relationships between the patients' clinical data and the morphological parameters of damage to paradental tissue are weak, multidirectional and uncertain in the majority of combinations (considering the available number of biopsy specimens studied). The close certain positive dependence between the damage of the squamous epithelium and the inflammation activity in the lamina propria mucosae, covering the tooth: in the vast majority of cases, the presence of damaged epithelium (within the biopsy specimen) is associated with the inflammation of high activity, was established as based on correlation relationships between the morphological parameters of damage to paradental tissue.

**Conclusions:** The found pathological changes and the correlations justify surgical tactics on paradental soft and osseous tissues that are directed on the LTM sparing.

**KEY WORDS:** pathomorphological features, clinical and morphological correlation dependencies, labored eruption, lower third molars

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## INTRODUCTION

The labored eruption of the LTM is one of the disturbances of the dentomaxillary system development, which is relatively frequently complicated by different pathological processes in the soft tissue and the parodontium of the third molar triggering the necessity of surgical interference [1-3].

There is no consensus in the related reference sources on the issue of the indications for the extraction of the intact LTM in case of complications of their eruption. A range of authors, who identified more frequent development of pathological changes in paradental tissue in the region of the LTM, support an idea of the relevance of «preventive» extraction of the intact LTM [4-9]. Other authors highlight the relatively low frequency of complications in the «restricted» LTM, which evidences in favor of an expectant treatment [10-13]. There are few research studies published on histological peculiarities of the separate pericoronal complications in the region of the

LTM, and the correlation dependencies between the clinical data and histological peculiarities of the damage [14, 15].

## THE AIM

The aim is to determine the clinical and morphological dependencies, which are important for diagnostics, treatment and prediction of outcomes of pathological processes in the region of the LTM with complicated eruption, as based on the study of histopathological changes of paradental tissue (mucous membrane, walls of retromolar pocket, alveolar bone tissue).

## MATERIALS AND METHODS

The materials of the study were 34 biopsy specimens of pathologically altered soft tissue and parodontium obtained as a result of pericoronectomy, extraction of the