

Peculiarities of Microflora of Odontogenic Inflammatory Processes in the Central Kazakhstan Region

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Abstract : Background: Odontogenic phlegmons are ranked the first among pyoinflammatory processes in the frequency of hospitalization in maxillofacial surgery in the post-Soviet countries. The main role in etiology is played by obligate anaerobes and aerobes. According to numerous data, the structure of aerobic pathogens is dominated by staphylococci and gram-negative bacteria. Aim: The research aim is to study the microflora of the purulent discharge odontogenic inflammatory processes. Materials and methods: A total of 220 patients have been examined, of which 120 patients aged 25-59 years have been included in the research who did not have comorbidity hospitalized in the maxillofacial hospital in Karaganda (Kazakhstan) from January 2016 to July 2017. The bacteriological research has been carried out on the basis of the multiaccess laboratory of the KSMU, through the Matrix Assisted Laser Desorption/Ionization (MALDI) apparatus. The material sample was pus from the inflammation focus, taken during the operating period. Results: According to the research among 120 patients (100%), 15 patients (12.5%) have had microorganisms not grown. From 105 (87.5%) bacteriological results, it has been revealed the following 1) Streptococcus: 51 (42.5%): Streptococcus beta-haemolytic: 17 (14.2%), Streptococcus pneumoniae: 12 (10%), Streptococcus anginosus: 8 (6.6%), Streptococcus oralis: 8 (6.6%), Streptococcus constellatus: 6 (5.0%); 2) Staphylococci: 27 (22.5%): Staphylococci aureus: 14 (11.7%) and Staphylococci epidermidis: 13 (10.8%); 3) Pseudomonas aeruginosa: 12 (10%); 4) Neisseria: 11 (9.1%): Neisseria mucosa: 5 (4.1%) and Neisseria macacae: 6 (5.0%); 5) Klebsiella pneumoniae: 2 (1.7%); 6) Stenotrophomonas maltophilia: 2 (1.7%). 15 patients (12.5%) experienced complications in the form of 1) The dissemination of the process in 10 patients (8.4%). 2) Osteomyelitis in 3 (2.5%). 3) Mediastinitis in 1 (0.8%). 4) Sinusitis in 1 (0.8%). 15 patients (100%) were carried out repeated bacteriological examination, the following was revealed: 1) Streptococcus: 10 (66.7%): Streptococcus beta-haemolytic: 4 (26.7%), Streptococcus pneumoniae: 2 (13.3%), Streptococcus anginosus: 2 (13.3%), Streptococcus oralis: 1 (6.7%), Streptococcus constellatus: 1 (6.7%); 2) Staphylococci: 4 (26.7%): Staphylococci aureus: 3 (20%) and Staphylococci epidermidis: 1 (6.7%); 3) Pseudomonas aeruginosa: 1 (6.7%). Conclusions: Thus, according to our research data, streptococci predominate in the odontogenic processes microflora in aerobic flora in the central Kazakhstan region, which refutes the leading role of staphylococci in the development of odontogenic inflammatory processes, thus creating prerequisites for studying new treatment approaches.

Keywords : maxillofacial surgery, microflora, odontogenic phlegmons, pyo-inflammatory

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