

EXPERIENCE IN THE TREATMENT OF PHLEGMON OF THE MAXILLOFACIAL AREA AND DEEP NECK INFECTIONS USING PHOTODYNAMIC THERAPY

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Introduction. Phlegmons are the most common forms of pyoinflammatory processes in the maxillofacial area and neck.

Aim of research to improve outcomes in the treatment of odontogenic phlegmons of maxillofacial area and deep neck infections by implementing photodynamic therapy.

Material and methods. The treatment practice of 62 patients aged from 18 to 70 years having phlegmons of maxillofacial area and deep neck infections has been described in the present study. All patients underwent clinical laboratory investigation considering microbiological and immunological aspects, cytological investigation of wound discharge being performed as well. The patients were divided into two groups according to the treatment method. The first group included 30 patients who were given standard treatment. The second groups of 32 patients in addition to traditional treatment were administered photodynamic therapy. [Photolon®] (chlorin e6) was used as a photosensitizer. This was infused into cellular spaces of maxillofacial area and neck.

Photosensitizer was activated applying LLLT (Low Level Light Therapy) with the use of therapeutic laser [Rodnik-1] (Belarus). LLLT was started one hour after the infusion of [Photolon®] inside a wound.

Results. The analysis of the research results has demonstrated high efficiency of the suggested treatment for patients with phlegmons of maxillofacial area and neck. According to the data of clinical observation the application of photodynamic therapy in comparison with traditional method of treatment showed:

- a) reduction of cleaning terms of wound area from purulent-necrotic masses – 2,5 fold,
- b) granulation increase – 2,3 fold,
- c) acceleration in epithelization – 2,1 fold.

Microbiological research demonstrated diminution of microbial seeding already on the third day in patients receiving photodynamic therapy. According to cytological analysis of wound exudates following photodynamic therapy the activation of phagocytosis and diminution of inflammatory tissues infiltration were observed.

Conclusion. Photodynamic therapy in comparison with traditional method of treatment reduce terms of cleaning of wound from purulent-necrotic masses, increase process of granulation, acceleration in process of epithelization and as a result: reduction of recovery terms.