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**CLINICAL EVALUATION OF THE EFFECT OF VITAMIN B COMPLEX (MILGAMMA) INJECTION ON POSTOPERATIVE PAIN AND INFLAMMATION IN PATIENTS WITH IMPACTED AND DYSTOPIC MANDIBULAR THIRD MOLARS**

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**Relevance.** Odontogenic infections, including periostitis and periodontitis affecting mandibular teeth, are common acute conditions in dental surgery. These conditions typically present with edema, swelling, trismus, and pain. Standard management involves surgical drainage combined with systemic antibiotic therapy. However, concerns regarding antibiotic resistance, systemic side effects, and patient compliance have increased interest in alternative approaches, particularly topical drug delivery systems. Metronidazole gel provides a high local drug concentration with minimal systemic absorption, making it a promising adjunct in treatment.

**Aim:** the study was conducted at City Clinical Polyclinic No. 30 in Minsk, Belarus, aims to compare the effectiveness of topical 1% metronidazole gel used in conjunction with surgical drainage versus systemic metronidazole therapy in reducing symptom duration and accelerating clinical resolution of localized odontogenic infections involving mandibular teeth.

**Materials and methods.** This study included 40 patients diagnosed with localized odontogenic infections of mandibular origin. Exclusion criteria comprised recent antibiotic use, hypersensitivity to metronidazole or articaine, and systemic conditions affecting healing.

Patients were randomly allocated into two groups. The control group received conventional treatment consisting of surgical drainage combined with systemic metronidazole therapy. The experimental group received topical 1% metronidazole gel in addition to surgical drainage.

All procedures were performed by a single operator under aseptic conditions. Following administration of an inferior alveolar nerve block using 4% articaine with epinephrine (1:100,000), an incision was made over the fluctuant area. The site was irrigated with 0.05% chlorhexidine solution, and a drain was placed for 48–72 hours. In the experimental group, metronidazole gel was applied into the periosteal space. All patients were instructed to rinse with chlorhexidine twice daily.

**Results and their discussion.** In the conventional treatment group (systemic metronidazole), severe pain persisted for up to 48 hours, and complete resolution of infection was achieved in approximately 4 days.

In contrast, in the group treated with topical metronidazole gel, severe pain resolved within 24 hours. Complete clinical resolution—characterized by absence of purulent discharge, reduction of edema, and restoration of normal mucosal appearance—was observed within 2 days.

**Conclusions.** The use of topical 1% metronidazole gel as an adjunct to surgical drainage significantly reduces the duration of pain and accelerates the healing process compared to systemic metronidazole therapy. This approach may represent a more effective and targeted treatment strategy for acute localized odontogenic infections.