**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ**
**БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ**

# М А Т Е Р І А Л И

**106-ї підсумкової науково-практичної конференції**
**з міжнародною участю**
**професорсько-викладацького колективу**
**БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ**
**03, 05, 10 лютого 2025 року**

Конференція внесена до Реєстру заходів безперервного професійного розвитку, які проводитимуться у 2025 році №1005249

**Чернівці – 2025**

УДК 61(063)
М 34

Матеріали підсумкової 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) – Чернівці: Медуніверситет, 2025. – 450 с. іл.

У збірнику представлені матеріали 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) зі стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.



ISBN 978-617-519-135-4

compared to other methods (suture material, laser technology) used to connect the edges of postoperative wounds.

**Matsiuk D.I.**

## ASSESSMENT OF THE BONE TISSUE STATE IN PATIENTS WITH MANDIBULAR FRACTURES, ON THEIR ADMISSION TO HOSPITAL USING X-RAY METHOD

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**Introduction.** Results of numerous studies indicate that isolated mandibular fractures take a leading position among injuries of the facial part of the cranium. It stipulates clinicians to search new rational methods of treatment and management of patients.

**The aim of the study.** To assess the bone tissue state in patients with mandibular fractures, on their admission to hospital using X-ray method.

**Materials and methods.** To achieve the aim of the study, 151 patients with mandibular fractures, of different age and gender, were examined.

**Results.** As the result of the study, we analyzed the qualitative and quantitative state of the bone tissue of the lower jaw using radiological methods in patients with mandibular fractures. Analysis of the orthopantomograms of patients with mandibular fractures applying MCI index determined that C2 type of the bone tissue prevailed in individuals of both genders. It was found in 62,25±3,94 % of the examined, $p<0,01$. C1 type of the bone tissue was found in 2,0 times less number of the individuals with mandibular fractures in comparison with those having C2 type of the bone tissue (29,80±3,72 % against 62,25±3,94 %, $p<0,01$, respectively. C3 type of the bone tissue was found in 12 patients with mandibular fractures (7,95±2,20 %). It appeared to be 3,7 times and 7,8 times higher than the number of individuals with КТ C1 and C2 types, respectively, p, $p_1<0,01$. C4 type of the bone tissue was not determined in patients with mandibular fractures. It should be noted, that C1 type of the mandibular cortical plate was diagnosed 1,4 times frequently among males than females with mandibular fractures (33,70±4,93 % against 23,73±5,53 %, $p>0,05$, respectively). C2 type was found in almost the same number of individuals of both genders: in 60,87±5,09 % of males and in 64,41±6,23 % of females, $p>0,05$. At the same time, C3 type of the mandibular cortical plate was found 2,2 timed frequently in females than in males with traumatic injuries of the lower jaw (11,86±4,20 % against 5,43±1,36 %, $p>0,05$, respectively). Occurrence of C2 type of the mandibular cortical plate in patients of both genders with mandibular fractures was of wavy nature. It increased from 36,36±5,02 %, $p<0,01$ to 70,59±4,75 %, p, $p_3<0,01$ in men at the age of 18-25 years and 26-35 years respectively. In women at the age of 18-25 years it ranged from 36,67±6,26 %, $p<0,01$ to 78,26±5,36 % at the age of 26-35 years, p, $p_3<0,01$. At the same time, patients of both genders presented lower occurrence of C2 type at the age of 36-44 years. It was found in 66,67±4,91 of men and in 64,0±6,24 % of women, p, $p_3<0,01$.

**Conclusions.** The frequency of detection of C1 type of the mandibular cortical plate was found to decrease with increasing age of the examined patients of both genders. It decreased from 63,64±5,02 % at the age of 18-25 years to 19,44±4,12 % at the age of 36-44 years among men, $p_3<0,01$. Among women it was from 63,63±6,26 % at the age of 18-25 years to 12,0±4,23 % at the age of 36-44 years, $p_3<0,01$, $p_2>0,05$. C2 type of the mandibular cortical plate was examined among men at the age of 36-44 years – 13,89±3,60 % and among women – 4,34±2,65 %, $p<0,05$, $p_1$, $p_2$ ,$p_3<0,01$, at the age of 26-35 to 24,0±5,56 %, $p_1$, $p_3$ , of the individuals at the age of 36-44 years.

C1 type of the mandibular cortical plate was diagnosed 1,4 times more frequently among men than among women (33,70 % against 23,73 %, respectively), and C3 type – 2,2 times more frequently among women than among men (11,86 % against 5,43 %, respectively). At the same time, C2 type of the mandibular cortical plate was found in 60,87 % of males and in 64,41 % of females.