

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



МАТЕРІАЛИ

**105-ї підсумкової науково-практичної конференції
з міжнародною участю
професорсько-викладацького персоналу
БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ
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Матеріали підсумкової 105-ї науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) – Чернівці: Медуніверситет, 2024. – 477 с. іл.

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У збірнику представлені матеріали 105-ї підсумкової науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) із стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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control group ($p>0.05$), but differed significantly from the ratio indicators in the AP ($p<0.05$). The ratio of WSZ indicators in LL of the small (1.20 ± 0.03 units) and large (1.19 ± 0.02 units) intestines were not significantly different ($p>0.05$), but were significantly different from the control group ratio indicators ($p<0.01$) and from the ratio indicators in the AL and EL of the intestines ($p<0.05$).

Conclusions. The ratio of WSZ indicators at the wavelengths $\lambda=0.63/\lambda=0.4 \mu\text{m}$ is statistically significantly different in the viable intestinal walls and in the non-viable intestinal walls. Measurement of WSZ ratio indicators can be used to determine intestines viability precisely.

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THE CLINICAL PREDICTORS OF THE UPPER ULCER REBLEEDING

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Introduction. Acute upper ulcer bleeding is an actual problem nowadays. The frequency of recurrent ulcerative bleeding remains high despite the advances of endoscopic haemostasis. So further research of its prognosis and treatment methods is necessary.

The aim of the study. The analysis of the risk factors for relapse of upper ulcer bleeding.

Material and methods. 203 patients with upper ulcer bleeding: males 135 (66,5%), females - 68 (33,3%). The average age was $56,6\pm 17$. All the patients were examined and treated conservatively according to the current minutes. Analysis of the main clinical and anthropometric criteria was performed.

Results. Ulcers were localized in the duodenum – in 127 (62,3%) patients in most cases. Gastric ulcers were in 68 (33,3%) patients. Gastroduodenal ulcers were in 9 (4,4%) patients. The ulcer frequency incidence was higher in males rather than in females regardless of the ulcer location. Most of the patients had no history of ulcers ($n = 109$ (53,4%). 10 (4,9%) patients had the ulcerative history up to 1 year, up to 1-3 years - 21 (10,3%) patients, 16 (7,8%) people had peptic ulcer disease from 5 to 10 years. 39 (19,2%) patients had the ulcerative history more than 10 years.

After primary EGDS the patients were carried at least one EGDS within next 3 days in order to control haemostasis and the treatment effectiveness. In addition, 31 (15,2%) patients were carried more than one controlling EGDS. If necessary, endoscopic haemostasis was performed during the controlling EGDS. For endoscopic haemostasis we performed injections around the ulcer. We used 0.9% saline sodium chloride with epinephrine 1:10, or tranexamic acid (Tranexam, Hemaxam, Sangera) in the same ratio. We carried out the injections on the ulcer periphery. The relapse rate in these cases is, depending on the location and other factors, 2-5%. The surgery was performed in cases of the haemostasis achievement failure by endoscopic way. The rebleeding was in 24 (11,8%) patients. Most rebleeding ($n = 11$ (45,8%)) was within 2-3 days after the hospitalization. At a later date rebleeding was in 9 (37,5%) patients. The lowest number of rebleeding was during the first day - 4 (16,7 %) cases. Most cases of rebleeding were in males - 17 (70,8%). 9 (64,29%) patients with the rebleeding had the I blood group, 4 (28,57%) patients had the II blood group, 7 (14%) patients had the III blood group and 1 patient had the IV blood group. The majority of rebleeding ($n = 15$ (62,5%)) happened in patients who had ulcer in the anamnesis. Clear link between ulcer localization and rebleeding rate was not found. The mentioned above shows that major prediction scales of the bleeding risk need to be improved. In particular, the most common scale called Forrest is static, doesn't take into account the consequences of the endoscopic treatment measures, local features, bleeding appearance mechanisms. Glasgow Blatchford scale is based only on clinical and laboratory displays, ignores the bleeding endoscopic stigmata. Rockall scale is based on a combination of clinical and endoscopic criteria. This allows to estimate the rebleeding opportunity right during the primary endoscopic examination, making it more acceptable. However, the given scale does not take into account all the possible factors, that facilitate the rebleeding. 15 (62,5%) patients with rebleeding had II A class by Forrest. 3 (12,5%) patients with rebleeding had 0 points by Glasgow Blatchford Score, 11 (45,83%) patients with rebleeding had the sum of points less than 5, and the other 10 (41,67%) - more than 5. The rebleeding number increased as the number of points by the Rockall Score increased. Most patients ($n=16$ (66,67%)) had 5-6 points.

Conclusions. Prognostic scales recommended by international guidelines do not take into account a number of important rebleeding predictors. Prognostic scales need to be improved. The standard method of injection endoscopic hemostasis needs to be improved. Only a complex of diagnostic, prognostic, and management measures can reduce the number of rebleeding.

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LARYNGEAL NERVE DAMAGE CONTROL ALGORITHM
DURING THYROID GLAND SURGERY

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Introduction. Recurrent laryngeal nerve palsy (RLN) is the most common and serious complication after thyroid surgery. Most surgeons do their best to prevent this. Several studies have shown that routine identification of RLN using intraoperative neuromonitoring (IONM) reduced the rate of permanent RLN paralysis. However, nerve damage still occurs in up to 5% of temporary paralysis (neuropraxia) and less than 1% of permanent paralysis (neurotmesis).

The aim of the study. Determination of potential causes of RLN damage during surgery using the developed intraoperative neuromonitoring algorithm.

Material and methods. The study was conducted on the basis of the Chernivtsi Regional Clinical Hospital. Written informed consent was obtained from each patient. Patients were informed about the intention to use the INNOMED C2 (Germany) neuromonitoring system, which helps to localize and identify the RLN and assess its function during surgery.

From April to August 2023, 23 patients (6 men and 17 women; aged 24 to 78 years; an average age was 47 years) were operated on various thyroid diseases. The same operating team performed the operations. A total of 15 hemithyroidectomies and 8 total thyroidectomies were fulfilled. Thus, in this study 31 nerves, being in the area of surgical manipulation, were involved.

For general anesthesia, all patients were intubated using an endotracheal tube with a 4-channel INNOMED LARYNGEAL ELECTROD 7-9 mm. (Germany).

An algorithm for obtaining electromagnetic signals from n. vagus developed for intraoperative neuromonitoring n. vagus and RLN before and after removal of part of the thyroid gland from one side (hemithyroidectomy) or from both sides (thyroidectomy).

The developed algorithm consists of several stages: Stage 1: Signal V1 - the output signal received from stimulation n. vagus with Prass monopolar probe before identification of RLN. Stage 2: The R1 signal is the signal obtained from the RLN, visualized at any site in the tracheoesophageal groove. Stage 3: The R2 signal is the signal obtained by stimulating the RLN in the most proximally exposed part after it has been completely separated from Berry's ligament. Stage 4: Signal V2 - control signal from n. vagus after complete hemostasis of the operative field.

Results. Loss of signals was recorded on six nerves after removal of a lobe of the thyroid gland, and the causes of their damage were well elucidated thanks to the IONM algorithm. Thus, two injuries were caused by the surrounding connective tissue compression during the application of a ligature for the purpose of hemostasis in the area of RLN passage. The detected decrease in the R2 signal and, accordingly, V2 on the side of the same name, made it possible to release promptly this area from compression. Two nerves were pinched inadvertently in a clamp near the anatomical formation - tubercle of Zuckerkandl. The signal change also made it possible to transfer the clamps to a safe area in due time. Another two nerves were found to have conduction disturbances due to obvious overstretching in the area of Berry's ligament during mobilization of the lobe of the gland from the lateral side.

Two nerves regained signals just before the wound was closed. Another four nerves did not regain signals before wound closure, and all cases developed a temporary postoperative RLN palsy that resolved 40 to 60 days postoperatively.

Conclusions. The mechanism of RLN injury may differ among different surgeons, but the developed IONM algorithm is useful for clarifying surgical errors during manipulations near the