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БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ

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106-ї підсумкової науково-практичної конференції
з міжнародною участю
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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.

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standardization that reduces human error and improves reproducibility across different clinical settings. Moreover, AI-based tools are increasingly being integrated with other diagnostic methods, including spectroscopy, to produce objective, quantitative, and non-invasive diagnostic data. Such integrations are particularly beneficial in resource-limited settings, where access to specialist healthcare providers may be limited.

Results. Despite these advancements, several barriers continue to hinder the effective implementation of oral cancer screening programs. Financial constraints are a significant challenge, especially in low- and middle-income countries, where healthcare resources are often limited. Additionally, a lack of public awareness about the importance of oral cancer screening and limited knowledge among healthcare providers about emerging diagnostic technologies further impede progress. Many high-risk groups, such as smokers, heavy alcohol users, and individuals with a history of HPV infection, are particularly under-screened due to these systemic barriers. Addressing these issues requires a multifaceted approach that includes increased patient education, improved training for healthcare providers on both traditional and advanced screening methods, and reforms within healthcare systems to make screening more accessible and affordable.

Conclusions. This review highlights an urgent need for more effective, evidence-based screening methods and the continued development of early diagnostic tools. The integration of AI with advanced technologies like spectroscopy offers a promising future direction in oral cancer diagnostics, providing clinicians with tools that are not only highly accurate but also fast and non-invasive. Such characteristics make these methods ideal for widespread clinical use, potentially transforming the landscape of oral cancer detection and management. Ongoing research and development in these areas will be crucial in improving early detection rates, reducing mortality, and enhancing patient outcomes.

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SALIVA SPECTROSCOPY AS A NON-INVASIVE DIAGNOSTIC TOOL FOR EARLY DETECTION OF ORAL CANCER: A LITERATURE REVIEW

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Introduction. Oral cancer is a serious and potentially life-threatening disease impacting millions worldwide. Early detection is essential for effective treatment, but traditional diagnostic methods, such as biopsies, are often invasive and costly. Saliva spectroscopy has emerged as a promising alternative, offering a non-invasive and cost-effective diagnostic approach for oral cancer. Saliva contains numerous biomarkers that may indicate the presence of oral cancer, and spectroscopy techniques can detect changes in their concentration.

The aim of the study. This literature review aims to critically evaluate the current research on saliva spectroscopy as a diagnostic tool for oral cancer. It explores saliva spectroscopy's potential to serve as a non-invasive, cost-effective method for early detection. By analyzing existing literature, the review seeks to determine the diagnostic accuracy of saliva spectroscopy and its implications for clinical practice and future research.

Material and methods. This literature review involved a systematic search of electronic databases, including PubMed, Scopus, and Web of Science, limited to studies published in English from 2013 to 2024. Search terms included "saliva spectroscopy," "oral cancer," "diagnosis," and "biomarkers." Studies were included if they assessed the diagnostic accuracy of saliva spectroscopy in oral cancer detection.

Results. The review included several studies using saliva spectroscopy in disease diagnostics, with a focus on oral cancer. Vibrational spectroscopy techniques, particularly Raman and infrared spectroscopy, showed potential as rapid, label-free, non-invasive tools that provide detailed salivary profiles and aid in biomarker discovery for various diseases, including oral cancer. The literature highlights the role of saliva-based diagnostics in translational cancer research.

Recent studies examined the diagnostic accuracy of saliva spectroscopy for oral cancer but yielded mixed results. For instance, the Cochrane Library review noted an absence of eligible

diagnostic accuracy studies for blood or saliva sample analysis in oral cancer detection. Conversely, a systematic review and meta-analysis underscored the diagnostic capability of salivary biomarkers for assessing head and neck cancer, suggesting potential applications in oral cancer detection. Although precise diagnostic accuracy rates for saliva spectroscopy in oral cancer remain unreported, the general promise of saliva-based diagnostics is evident, and further research is needed to establish their diagnostic accuracy conclusively.

Based on review findings, saliva spectroscopy shows considerable promise as a diagnostic method for oral cancer. Although specific biomarkers for diagnosing oral cancer through saliva have yet to be definitively identified, the literature supports saliva's potential as a non-invasive, reliable, and practical diagnostic medium. Moreover, infrared and Raman spectroscopy provide valuable insights into saliva's chemical composition, highlighting their utility in diagnosing and monitoring oral cancer.

Conclusions. Saliva offers potential for oral cancer diagnosis, with biomarker variations indicating the disease. This review identifies possible salivary diagnostic molecules, emphasizing saliva's non-invasive, reliable, and cost-effective role in detecting oral cancer. Saliva-based diagnostics are a vital part of cancer research, functioning as a "liquid biopsy" for early, non-invasive detection of oral cancer. Additional research is necessary to identify specific biomarkers that could enable widespread early detection using saliva samples. For saliva spectroscopy to reach its full diagnostic potential for oral cancer, further advancements in methodology and quantification protocols are essential.

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INFLUENCE OF DURATION OF INTRA-ABDOMINAL HYPERTENSION ON THE OCCURRENCE OF POSTOPERATIVE EVENTRATION

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Introduction. To date, despite the development of modern medicine, the frequency of postoperative eventuation remains at a fairly high level and ranges from 0.5 to 2.35%. The lethality in the development of this complication reaches 40-65%, especially when it occurs against the background of a purulent postoperative wound.

Intra-abdominal hypertension (IAH) is one of the many important factors that have a direct impact on the occurrence of postoperative eventration.

If the role of the level of IAH in the development of postoperative eventuation is quite clear and predictable, the duration of IAH and its degree remain undefined. Studying the duration of IAH in the development of postoperative events will make it possible to better understand the etiopathogenesis of this complication and find ways to prevent it effectively.

The aim of the study. Therefore, the study aimed to investigate the role of the duration of intra-abdominal hypertension, depending on its degree, in the development of postoperative events.

Material and methods. To achieve this goal, we examined 59 operated patients with malignant neoplasms of the colon, in the II and III stages of the disease. Right-sided hemicolectomy was performed in 18 (30.5%) patients, left-sided hemicolectomy in 15 (25.4%) patients, sigmoid colon resection in 16 (27.2%) patients, and transverse colon resection in 10 (16.9%) patients. All patients underwent a laparotomy during surgery, with an average length of 21.3 ± 0.62 cm.

To achieve the goal, patients were divided into two groups. The main group consisted of individuals who had an eventration during the early postoperative period, and the comparison group was formed by patients who did not have an eventration during the early postoperative period.

The IAH level was measured through the bladder three times a day. After the bladder had completely emptied, 25 ml of physiological solution was injected through the Foley catheter. A device for transvesical IAH measurement was attached to the catheter.

All patients received standard postoperative treatment according to the protocols for providing medical care to patients with urgent surgical pathology of the abdominal organs.