

**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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ADHESIVE BOWEL OBSTRUCTION OR PERFORATION AS A RESULT OF MAGNETS INGESTION IN CHILDREN: DIAGNOSTIC, MANAGEMENT, SURGICAL TREATMENT

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Introduction. The ingestion of multiple magnets is harmful in children because it can cause intestinal obstruction and/or perforation. Multiple magnet ingestions, subsequent potential complications and the importance of early detection and appropriate treatment remain both underrecognized and underappreciated. The increasing number of complications worldwide reported as a result of magnet ingestion indicates not only an acute lack of awareness of the condition among medical professionals, but also among parents and caregivers, who in most cases will be the first to hear of magnet ingestion. Prevention of this condition remains a much better option than cure. Proper education and improved awareness among parents, caregivers and frontline medical staff is key in addressing this rapidly emerging issue. The goal of managing such cases of suspected magnet ingestion should be aimed at reducing delays between ingestion time, diagnosis time and intervention time.

The aim of the study. In clinical investigation we provided assessment of 9 children who presented to Chernivtsi City Clinical Hospital between January 2014 and August 2023 with a history of multiple magnet ingestion. Clinical picture, major symptoms, management and outcomes were analyzed.

Material and methods. In total, 9 children with foreign bodies of the gastrointestinal tract were treated in a surgical hospital under 24-hour supervision, whose parents complained about the deterioration of the children's well-being, lack of appetite, decreased activity, rare stools with impurities of blood and mucus (2 children).

Results. In 4 children, the magnets came out on their own, in 2 they were removed endoscopically, in 3 children they were operated on urgently (after 7, 12, 18 days from the time of ingestion). The operated children underwent laparotomy removal of magnets with adhesiolysis and suturing of the perforated holes of the small intestine, colon and stomach. There were no complications in all cases. The most dangerous pathognomonic complaint in children is the ingestion of numerous magnets over a long period of 2-3 hours or more.

Conclusions. On the basis of clinical data and the presence of complications after swallowing magnets by children, it is necessary to carry out more thorough prevention and conversations among the population with the publication of articles, public speeches on television and in social networks. Early treatment and detection of foreign bodies of the gastrointestinal tract in children contributes to faster treatment and early surgical intervention aims to avoid the development of possible complications.

Kozariichuk N.Ya.

DIGITAL TECHNOLOGY IN THE SCREENING OF DIABETIC RETINOPATHY

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Introduction. Diabetic retinopathy (DR) is a microvascular complication of diabetes mellitus and a major cause of visual loss in adults of the working-age group. The International Diabetes Federation estimated the global population with diabetes mellitus (DM) to be 463 million in 2019 and 700 million in 2045. Risk factors for development of DR include duration of diabetes and poor glycemic control. Typical fundus features of diabetic retinopathy include microaneurysms, hard exudates, macular edema and new vessels. The management options include strict control of the systemic conditions, intravitreal pharmacotherapy and laser photocoagulation. With early diagnosis and prompt management good final visual acuity may be achieved in most patients with diabetic retinopathy.

The aim of the study. The purpose of this review is to examine the applications of novel digital technology for the screening and management of patients with diabetic retinopathy (DR). It is generally accepted that screening of DR is cost-effective and can detect DR before it becomes sight-threatening to allow timely treatment.

Material and methods. We conducted a systematic review using PubMed for population-based studies published up to September 2022. A PubMed engine search was performed, using the terms “Diabetic Retinopathy”, “Telemedicine”, “Artificial intelligence”, “Digital health”.

Results. Ophthalmology has been a leader in developing Artificial Intelligence algorithms for clinical use. Periodical screening for diabetic retinopathy by an ophthalmologist is expensive and demanding. Automated DR image evaluation with Artificial Intelligence tools may represent a clinical and cost-effective alternative for the detection of retinopathy.

The World Health Organisation (WHO) recommended diabetic retinopathy screening to be prioritized to ensure early detection. The recommendation was to begin screening at the diagnosis of diabetes for type 2 DM, and five years post initial diagnosis and at puberty for the patient with type 1 DM. According to the St. Vincent Declaration of 1990, European countries should «reduce the risk of visual impairment due to diabetic retinopathy by systematic programmes of screening reaching at least 80% of the population». Since 1990, meetings of national representatives have been held at regular intervals to discuss progress and exchange experiences. Most recently, the WHO European Region recommended diabetic retinopathy screening for all people with diabetes and provided guidance on overcoming obstacles to implementation.

Food and Drug Administration (FDA) has approved a software program Artificial Intelligence - based Device IDx-DR for the detection of «more than mild diabetic retinopathy» or its absence in 2018. In 2020, EyeArt (Eyenuk) received FDA clearance for the autonomous detection of «more than mild diabetic retinopathy and vision-threatening diabetic retinopathy». SELENA+ (EyrIS Pte Ltd, Singapore) has received European CE Mark Approval and is planned to be deployed as part of the national DR screening program in Singapore. The largest national diabetic retinopathy screening programme is located in the UK, with most parts of the Diabetic Eye Screening Programme implemented in 2003. Diabetes mellitus and its eye complications, including DR, are particularly well suited to digital technologies, providing an ideal model for telehealth initiatives and real-world applications. The current development in the adoption of telemedicine, artificial intelligence

Conclusions. Telemedicine programs based on imaging with these low-cost devices and remote interpretation have opened new avenues for assessing DR. Early diagnoses and treatment of DM and DR are critical measures for preventing permanent blindness.

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ETIOPATHOGENETIC TREATMENT OF PARASITIC BLEPHARONCONJUNCTIVITIS

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Introduction. Blepharitis, blepharoconjunctivitis and dermatitis caused by the Demodex mite are the most common inflammatory diseases of the eyelids. Asymptomatic carriage of the parasite is possible. Children get sick extremely rarely, in adults in the 3-4th decade of life, the disease is revealed in 43% of the examined, among elderly patients, demodex is detected in 90% of cases. In conditions of reduced immunity, adverse external conditions and internal factors, diseases of the nervous, vascular, endocrine and digestive systems, metabolic disorders, demodicosis occur. The tick parasitizes in the ducts of the sebaceous, meibomian glands and hair follicles. Only drug therapy of demodicosis is ineffective, as only the most superficial ticks die.

The aim of the study is to improve the treatment of demodicosis blepharoconjunctivitis.

Material and methods. We use a complex approach to the treatment of demodicosis blepharoconjunctivitis by sequentially application specific medications to the eyelid skin: Spregal®, Stop Demodex® gel or Navibleft™ TTO Intensive Care micellar foam and subsequent darsonvalization of the eyelids. The drugs should be applied to the front edge of the eyelids using an