

**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.

Загальна редакція: професор Геруш І.В., професорка Грицюк М.І., професор Безрук В.В.

Наукові рецензенти:

професор Братенко М.К.

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професор Юзько О.М.

професорка Годованець О.І.

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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.

Kuchuk O.P.

ETIOPATHOGENETIC TREATMENT OF PARASITIC BLEPHARONCONJUNCTIVITIS

Department of Paediatric Surgery, Otolaryngology and Ophthalmology

Bukovinian State Medical University

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

ear stick. The method of darsonvalization has the following therapeutic effects: acaricidal and bactericidal – due to the action of spark discharge and ozone generated in the near electrode space of the apparatus for darsonvalization; analgesic and antipruritic effects – by increasing the sensitivity threshold of pain and tactile exteroceptors; immunostimulating effect also due to the action of a spark discharge, which stimulates phagocytosis and the release of biologically active substances that stimulate the humoral part of the immune system. Using this technique in the period 2012-2023, we treated (62) patients with Stop Demodex® gel, 58 patients with Spregal, and 10 people with Navibleft™ TTO Intensive Care micellar foam. The course of darsonvalization with the specified means lasted 10 days with the subsequent break for two weeks and repeated treatment. This treatment regimen corresponds to the full life cycle of the mite (15 days), as all treatments act only on adults ticks.

Results. Itching, swelling and redness of the eyelids after the first course of treatment decreased in 96.5% of patients using Spregal®. If at primary eyelash microscopy in the microscope slide 8-15 ticks in the investigated area were revealed, then after the first course of treatment with Spregal their number decreased to 1-2 in the investigated area. After re-treatment, the percentage of negative microscopic eyelash tests approached 100%. Almost similar data were obtained when combining darsonvalisation with the topical use of Stop Demodex® gel or Navibleft™ TTO Intensive Care micellar foam. Darsonvalization method involves contacting specific agents with the maximum number of parasites, even deep ones. In our opinion, the spark charge, due to the action on smooth muscle cells of meibomian and sebaceous glands, stimulates the release of their secretion together with the demodex mite, which is exposed to specific drugs previously applied to the skin. To prevent recurrence of the disease, we recommend daily regular therapeutic eyelid hygiene. For this purpose, it is necessary to carry out self-massage of eyelids about 1-2 minutes after a warm compress. The compress is usually performed using cotton swabs, immersed in hot water, squeezed and applied to closed eyelids for 1-2 minutes. Thermal procedures help to improve local metabolic processes and drain the excretory ducts of the meibomian glands. Self-massage is performed after applying an indifferent eye gel to the eyelash growth area, which helps to clean the surface of the eyelids from toxic agents, scales and crusts. We also recommend using Blephaclean wipes, Dermazol or Nizoral shampoo to treat the free lid margin, especially in patients with demodicosis of the facial skin and seborrheic blepharitis or dermatitis.

Conclusions. A complex etiopathogenetic method of treatment of demodicosis blepharitis by application of specific drugs on the skin of the eyelids and subsequent darsonvalization of the eyelids is an easy-to-use, affordable and effective way to treat demodicosis. Daily observance of therapeutic eyelid hygiene (self-massage with a cleansing gel after warm compresses) can significantly reduce the likelihood of exacerbation of demodicosis blepharoconjunctivitis.

Maksymyuk V.V.

ROLE OF THE HEREDITARY FACTORS IN PREDICTING THE COURSE OF ACUTE PANCREATITIS

*Department of Surgery № 1
Bukovinian State Medical University*

Introduction. An important role in the course of acute pancreatitis, hereat, is played by genetically determined defense mechanisms aimed at preventing an intrapancreatic activation of enzymes. One of such fundamental mechanisms is the neutralizing effect of the secretory pancreatic trypsin inhibitor (the serine protease inhibitor of Kazal's type I - SPINK1).

The aim of the study. Study of genetically determined defense mechanisms aimed at preventing intrapancreatic enzyme activation.

Material and methods. A comprehensive examination of 37 patients admitted to the hospital with acute pancreatitis signs was conducted.

Results. The research involved 37 people with different forms of acute pancreatitis. Among them: 25 (67.6%) men and 12 (34.2%) women. The presence of the favourable "wild type" N-allele ("wild type", WT) - 73,0% (27) of people was detected in the majority of the subjects. The pathological "mutant" S – variant was