

Report on Filatov Memorial Lectures – 2019, the Research-to-Practice Conference

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Filatov Memorial Lectures-2019, a research-to-practice conference with international participation, was held in Odesa on the 23rd -24th of May 2019. The event was organized by SI "The Filatov Institute of Eye Diseases and Tissue Therapy of the NAMS of Ukraine" and the Ukrainian Society of Ophthalmologists and supported by National Academy of Medical Science of Ukraine and Ministry of Health of Ukraine. This outstanding health care event combined an extensive relevant scientific and practical programme including 15 main sessions, 2 instructional courses, 3 industry-sponsored symposia, 5 workshops, and a poster presentation session, where over 110 Ukrainian and foreign specialists presented their innovations, inventions, and advances in the field of ophthalmology.

1102 delegates participated in the conference; of them, 1025 were from the regions of Ukraine as follows: Odesa - 209; Vinnytsya - 41, Volyn - 12, Dnipropetrovsk - 60, Donetsk - 25, Zhytomyr - 23, Zakarpattia - 15, Zaporizhzhya - 25, Ivano-Frankovsk - 6, Kyiv and Kyiv region - 276, Kirovograd - 12, Luhansk - 5, Lviv - 78, Mykolayiv - 16, Poltava - 30, Rivne - 31, Sumy - 10, Ternopil - 25, Kharkiv - 77, Kherson - 16, Khmelnytsk - 25, Cherkasy - 16, Chernigiv - 7, Chernivtsi - 28. Also, there were participants from Kazakhstan - 13, Azerbaijan - 1, Poland - 3, Russia - 1, the UK - 1, the USA - 1, Bulgaria - 3, Italy - 1, Moldova - 12, Germany - 2, Belarus - 26, Turkey - 8, Tunis - 1, Switzerland - 3, Jordan - 1 and UAE - 1.

Scientists, researchers, practicing ophthalmologists, and related specialists, including neonatologists, radiologists, chemotherapists, neuropathologists, phthisiologists, pharmacologists, and biologists, were engaged in the work of Filatov Memorial Lectures-2019 and had the opportunity to share their experience, to increase the expertise, and to expand their professional networking.

177 scientific papers by ophthalmologists and related specialists, including 86 papers by the Filatov Institute coworkers, were published in the Proceedings of the Conference.

The two-day programme of the Filatov Memorial Lectures-2019 was devoted to priority areas in ophthalmology, among which are corneal pathology,

keratoplasty, trauma and burn eye and orbit injuries, up-to-day organ-sparing treatment of tumors, diabetic eye diseases, vitreoretinal pathology, lasers in ophthalmology, reconstructive surgery, choroidal, retinal, and optic nerve pathology, pediatric ophthalmology, refractive errors, and oculomotor system pathology.

Professor Nataliya Pasyechnikova, Dr. Sc. (Med), an NAMS Corresponding Member, Director of the Filatov Institute, opened the research-to-practice conference with a welcome speech and demonstrated latest achievements in ophthalmology, highlighting the work performed in the Filatov Institute.

Professor Petja Vassileva (Sofia, Bulgaria), Ophthalmology Professor of Sofia Medical University, delivered the Filatov Memorial Lecture, emphasizing the outstanding contribution of academician V.P. Filatov to strengthening the collaboration between scientists from different countries. In addition, Professor Vassileva demonstrated the latest achievement of international and, in particular, Bulgarian ophthalmology. Professor Petja Vassileva was awarded the Filatov Medal for merits in the development of ophthalmology.

The Main Session 1 demonstrated new methods of diagnosis and treatment for corneal and ocular surface diseases. Mario Matthaai and Sebastian Siebelmann, specialists from Germany, presented the results of genetic and molecular research which make it possible to improve diagnosis and follow-up of patients with corneal pathology. In addition, they demonstrated the priority of using the microscope-integrated Optical Coherence Tomography which can visualize in real time surgical procedures in the anterior eye. Ryabenko O.I. (Russia) made a presentation on the social significance of the use of scleral lenses Zenlens in patients after penetrating keratoplasty, which, in addition to the visual acuity improvement, greatly improve the quality of life and provide an opportunity to return to work. Much attention was paid to effect of silver nanoparticles, activated by plasmon resonance, on neutrophil functional activity, which will provide an opportunity of developing new treatments for various pathologies in the future (Ulianov V. A., Velychko L. N., Makarova M. B., Bogdanova A. V., Skobeieva V.M. Tkachenko V.H.). The second part of the session, headed by

Professor G.I. Drozhzhyna (Odesa, Ukraine), was devoted to errors in diagnosis and treatment of corneal diseases. Peculiarities in approaches to diagnosis and treatment of rosacea keratitis, herpetic keratitis, and keratoconus were discussed (Gaydamaka T.B., Ivanovska O.V., Odesa, Ukraine). Ostashevskiy V. L. (Odesa, Ukraine) reported on errors in diagnostics and surgical treatment of pterygium.

During the Session called *Up-to-date Technologies in Microsurgery of Complicated Cataract*, Professor Dmytriiev S.K. (Odesa, Ukraine) demonstrated the main results of femtosecond laser-assisted cataract surgery of swelling cataracts; Parkhomenko G.Ya. (Kyiv, Ukraine) shared his experience of femtolaser assisted cataract surgery in complicated cases; Lazar Yu.M. (Odesa, Ukraine) reported on his experience of primary posterior curvilinear capsulorhexis in cataract phacoemulsification; and Grytsenko I.A. (Odesa, Ukraine) demonstrated features of operational diagnosis of posterior polar cataract using the femtosecond laser "LENSX".

The Main Session 3, devoted to modern aspects of surgical treatment of glaucoma, was held in a lively discussion under the moderation of Professor Novytskyi I.Ya. (Lviv, Ukraine). Pros and cons of glaucoma filtration surgery, minimally-invasive and combined glaucoma surgeries were reviewed.

Reports on vitreoretinal surgery for severe rhegmatogenous retinal detachment and proliferative diabetic retinopathy were presented at the Main Session 4. Professor Putienko O.O. noted the characteristics of vitreous surgery of the advanced stages of proliferative diabetic retinopathy. I. Kozak from the UAE, presented for discussion the results of ambilateral synchronized primary vitrectomy. Chien Wong (the UK) reported on advances in stage 4 ROP retinal detachment surgery.

The Session, called *Latest Technologies in Vitreoretinal Surgery*, gave rise to a lively discussion about modern approaches to a known problem. Paul Bernhard Henrich (Switzerland) reported on new possibilities and perspectives of ultrasonic vitrectomy. Umanets M.M. (Odesa, Ukraine) highlighted advantages and disadvantages of 27 G vitrectomy. Nazaretyan R.E. (Odesa, Ukraine) demonstrated the principle of ocular thermodynamics during vitrectomy with irrigation solutions of different temperatures.

In the Small Conference-hall there were two sessions on vascular pathology of the optic nerve and modern aspects of neurophthalmology. Prominent specialists shared their expertise and advances in this area. Zborovska O.V. (Odesa, Ukraine) reported on differentiated diagnosis of optic nerve swellings. Anokhina G.A. (Kyiv, Ukraine) made a presentation on the role of nutrition in prophylaxis and treatment of optic nerve atrophy and Khramenko N.I. (Odesa, Ukraine) gave characteristics of changes in ocular hemodynamic and immune status parameters in optic neuritis. Konovalova N.V. (Odesa, Ukraine) emphasized the need of differentiated diagnosis of ischemic optic neuropathy. Boichuk I.M. reported on diagnostics of

visual disorders and deviation in neuroophthalmological diseases.

At the *Diabetic Macular Edema* Session, Professor Naumenko V.O. (Odesa, Ukraine) highlighted certain characteristics of this disease. Jeffrey Kevin Luttrull from the USA shares his expertise in using laser for clinical management of DME. And Korol A.R. (Odesa, Ukraine) reported on blood flow disorders in the choroid and retina in diabetic macular edema.

The following session included presentations on up-to-date approaches to treatment and diagnosis of eye diseases. Thus, Igor Kozak (the UAE) presented a method of teleophthalmology – retinal laser telephotocoagulation. Daniela Mitova from Bulgaria reported on the new alternatives for AMD treatment. Paul Bernhard Henrich (Switzerland) demonstrated the diabetes-related changes in the protein composition of human retinal vascular basement membranes. Research of the efficacy of antiangiogenic therapy for some macular diseases in the framework of COAST.UA (interim analysis) were introduced by the author team, Korol A.R., Rostel V.V., Kustryn T.B., Nevskaya A.O. (Odesa, Ukraine).

On Day 2, there was a round table highlighting the issues of retinoblastoma diagnosis and treatment. Professor Bobrova N.F. (Odesa, Ukraine) shared her 10-year experience of combined (intravitreal and systemic) chemotherapy of retinoblastoma. In addition, experts in this area made presentations on modern liquidation surgery methods in retinoblastoma (Tronina S.A., Odesa, Ukraine), intraocular surgical treatment in unsuspected retinoblastoma (Dembovetska G.M., Odesa, Ukraine) and modern methods (PanoCam) to objectify diagnosis and dynamics in retinoblastoma treatment (Ivanitskaya O.V., Odesa, Ukraine).

At *Intraocular Melanoma* Session, up-to-date diagnosis and treatments for this oncology pathology were discussed. Maletskyi A.P. (Odesa, Ukraine) demonstrated the implication of interferon therapy and selective intraarterial chemotherapy in combination with xenon photocoagulation and their combination with brachytherapy in the treatment of patients with uveal melanoma.

The Session devoted to trauma and burn eye injuries was held in the small conference. Krasnovid T.A. (Odesa, Ukraine) reported on ocular trauma in military operations in the east of Ukraine and highlighted the main downsides of providing eye trauma emergency care. Professor Iakimenko S.A. (Odesa, Ukraine) defined the main indications, methods, and results of surgical treatment of eye burn injuries.

The final Session in the small conference hall included presentations on the treatment and diagnosis prognosis of refractive errors and oculomotor system disorders. Professor Serdiuchenko V.I. (Odesa, Ukraine) reported on threshold exposure duration for recognition of test-objects in norm, with strabismus, amblyopia and pathology of ocular fundus. Expected response to treatment of ambliopia

with myopic refraction was highlighted in the presentation made by Boichuk I.M. (Odesa, Ukraine). Measurement of autonomic innervation and its treatment in children with accommodation disorders using pupillography was reported by Bushuieva N.M. (Odesa, Ukraine). In addition, there were presentations on refractive errors in premature children, semitransparent occlusion for amblyopia, and asthenopia in students.

The Filatov Memorial Lectures-2019 programme included two instructional courses. The first course was organized by Zborovska O.V. and devoted to updates in diagnosis and treatment of scleritis. Thus, Zborovska O.V. (Odesa, Ukraine) described approaches in scleritis treatment. Also, there were reports on differential diagnosis of tuberculosis lesions of the eye (Konovalova N.V., Odesa, Ukraine) and on the importance of collaboration with a rheumatologist in treatment of autoimmune diseases (Vasylets V.V., Odesa, Ukraine). The presentation made by Marina Papadia from Italy was devoted to choriocapillitis. The second instructional course, organized by Poliakov S.I. (Odesa, Ukraine), covered the issues of clinical presentation, diagnosis and treatment of Thyroid Eye Disease. The experts in this area, Poliakov S.I. and Potapchuk O.V. (Odesa, Ukraine) and Buldygina Yu.V. (Kyiv, Ukraine), addressed the thyroid eye disease-related issues.

Five workshops were held during the conference:

- Modern methods of diagnosis and treatment of binocular vision disorders.
- Transplantation of the amniotic membrane for corneal pathology
- Puzzles in uveitis
- Automated computer perimetry for diagnosis of visual field disorders in glaucoma
- Diagnosis of eye diseases

The workshops provided an opportunity to discuss the features of diagnosis and treatments of the most common eye diseases, to review widespread errors in the clinical practice. The practical part covered case studies, findings interpretation, a choice of treatment tactics, etc. The workshops were relevant to visit by both ophthalmologists and family practitioners.

Primary partners of the Filatov Memorial Lectures-2019 were such companies: VALEANT, BAYER, and ALCON/NOVARTIS. They organized three industry-supported symposia on the cutting-edge treatments of eye diseases.

BAUSCH+LOMB (VALEANT PHARMACEUTICALS) symposium highlighted the issues related to uveal glaucoma treatment (Zborovska O.V., Odesa, Ukraine), characteristics of various intraocular lenses (Shevchik V.I., Chernihiv V.I., Ukraine), and computer vision syndrome and digital eye fatigue with solutions and advantages of contact lens corrections. (Timofeiev V.G., Samoiluk T.F., Kiv, Kharkiv, Ukraine).

BAYER symposium was opened by introductory remarks by professor Naumenko V.O.. The meeting was devoted to anti-VEGF therapy for macular diseases.

Andrii Korol (Odesa, Ukraine) provided an overview on principles, possibilities, treatment experience of anti-VEGF therapy with Eylea for neovascular age-related macular degeneration. The symposium's guest speaker was Igor Kozak (Slovakia/United Arab Emirates), one of the leading vitreoretinal and retinal specialists, who reported on the effective management of patients with diabetic macular edema: advanced treatment experience with Eylea.

On the second day of the event, there was ALCON/NOVARTIS symposium devoted to modern approaches to medical treatment of glaucoma (P.A. Bezditko, Kharkiv, Ukraine) and modern methods of presbyopia correction (Charchenko L.B., Parkhomenko G.Ia., Kyiv, Ukraine).

30 domestic and foreign companies presented pharmaceutical products, custom medical equipment and products for medical use.

The Filatov Memorial Lectures 2019 afforded an opportunity to band famous scientists, researchers, medical practitioners and allied experts for sharing experiences, expanding occupational contacts and business dealings.

According to results of discussions of reports and experience exchange, it is decided to recommend:

1. Departments of ophthalmology of higher educational medical institutions and institutions of graduate studies, SI "The Filatov Institute of Eye Diseases and Tissue Therapy of the National Academy of Medical Sciences of Ukraine", ophthalmologists from regions of Ukraine:

1.1. To provide annual further training of ophthalmologists, to pay special attention to training of doctors of family medicine, by holding seminars, further training courses, training with involvement of leading experts from departments of ophthalmology of improvement of doctors, medical universities and SI "The Filatov Institute of Eye Diseases and Tissue Therapy of the National Academy of Medical Sciences of Ukraine".

2. Leading experts on "ophthalmology" and "children's ophthalmology" of regional structural subdivisions from state administrations on health issues of the regions of Ukraine:

2.1. For the purpose of prevention of serious post-traumatic complications of an eye, ophthalmologists of regional and city polyclinics and hospitals, observe an algorithm of examination of patients with traumatic injuries of an eye, use adequate techniques of removal of intraocular enthetic matters depending on their localization. Patients with traumatic injuries of eyes, who need vitreoretinal interventions, should be sent to regional centers equipped with the corresponding equipment and highly qualified staff that knows surgery techniques on anterior and posterior eye segment and in Ukrainian ophthalmotraumatic center of SI "The Filatov Institute of Eye Diseases and Tissue Therapy of the National Academy of Medical Sciences of Ukraine". In most cases patients with severe burns of eyes (3-4 stage of severity) should have surgical treatment, it is necessary to direct them for treatment to specialized department of burn

pathology of an eye of SI "The Filatov Institute of Eye Diseases and Tissue Therapy of the National Academy of Medical Sciences of Ukraine", where there are all necessary conditions (transplant material, highly qualified specialists) for performing treatment.

2.2. For prevention of complications during treatment of unilateral amblyopia, to introduce into broad practice translucent occlusion that provides more productive result.

2.3. Ophthalmologists and children's ophthalmologists of polyclinics and in-patient hospital particularly examine children with complaints of discoloration of pupils or eyes, have oncological vigilance and at suspicion on an intraocular tumor, retinoblastoma, direct obligatory them to specialized children's the ophthalmologic center of SI "The Filatov Institute of Eye Diseases and Tissue Therapy of the National Academy of Medical Sciences of Ukraine" for careful examination, establishment of diagnosis and treatment. To carry out work on onboarding of all children's ophthalmologists with possible diagnostic mistakes and their consequences during undiagnosed retinoblastoma for the purpose of increasing oncological vigilance and timely elimination of false treatment.

2.4. To introduce modern techniques of early diagnosis of pathology of visual organ: optical coherent tomography, ultrasonic biomicroscopy and infrared diaphanoscopy in daily practice of ophthalmologists. To pay special attention to selection of effective methods of treatment of age degeneration of macule and aggravated myopia for the purpose of prevention of loss of central vision.

2.5. Due to growth of vascular diseases, atherosclerosis and diseases connected with violation of exchange processes, it is necessary to introduce into diagnostic practice of OCT of angiography for specification of methods of treatment of vascular abnormalities with defeat of a trunk of an optic nerve. Patients of this category should be conducted together with neuropathologists and neurosurgeons, during recurrence directed to SI "The Filatov Institute of Eye Diseases and Tissue Therapy of the National Academy of Medical Sciences of Ukraine".

2.6. Ophthalmologists of regional and city polyclinics and hospitals at suspicion and diagnosing of new growths of an eye, its appendages and orbits, patients should be directed to consultation to the specialized ophthalmooncological center of SI "The Filatov Institute of Eye Diseases and Tissue Therapy of the National Academy of Medical Sciences of Ukraine" for the purpose of specification of diagnosis and performing timely treatment.

3. SI "The Filatov Institute of Eye Diseases and Tissue Therapy of the National Academy of Medical Sciences of Ukraine":

3.1. To develop and inculcate a new form of education of doctors according to the order of the Ministry of Health of Ukraine from 22.02.2019 No 446 "Some Issues of Continuous Professional Development of Doctors" for improvement and further training of specialists.

3.2. To hold the Research-to-Practice Conference "Filatov Memorial Lectures 2020" in Odesa on May 21-22, 2020, which will give an opportunity to exchange experience not only to ophthalmologists, but also to experts of allied specialities, also to involve clinicians to the scientific work, to improve their skills and to introduce latest technologies into practice.

