

**ABSTRACTS SUBMITTED TO THE  
CONGRESS OF OPHTHALMOLOGISTS IN BOSNIA AND HERZEGOVINA  
Tuzla, November 11-14, 2009**

**P1:  
IMAGING IN NEURO-OPHTHALMOLOGY – MULTI-DISCIPLINARY APPROACH**

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**INTRODUCTION:** Neuro-radiological evaluation of vision disorders has substantially advanced during last decade. Computed tomography (CT) and magnetic resonance (MR) have been improved in last few years by functional neuro-imaging techniques (fMRI), positron emission tomography (PET), single photon emission computed tomography (SPECT), as well as CT and MR angiography.

**OBJECTIVE:** To establish if neuro-ophthalmologist, guided by already established guidelines for neuro-radiology imaging, can contribute to more efficient determination of diagnosis.

**METHOD:** Findings for patients of „Sunce-Agram“ polyclinic with vision disorders with indicated and executed neuro-radiology examinations were analysed retro-actively for period July 2008 to July 2009. Direct communication between specialists in ophthalmology, neurology, radiology and internal medicine was in place.

**DISCUSSION:** Several typical patients were shown with indicated and executed neuro-radiology examination shortly after ophthalmologic examination. Multi-disciplinary approach enabled assumptions on possible location of pathologic process, as well as completion of examination with contrast series and display of wider region, in cases where such approach would explain adjoined alternative symptomatology.

**CONCLUSION:** Neuro-radiological examinations are not reserved for neurologist only and ophthalmologist should be encouraged to use them equally as other ophthalmologic diagnostic procedures. Multi-disciplinary approach further reduces time required for establishing diagnosis, which enables timely commencement of therapy.

**P2:  
INTRAVITREAL BEVACUZIMAB FOR THE TREATMENT OF CENTRAL SEROUS  
CHORIORETINOPATHY: A CASE REPORT**

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A previously healthy, 44 middle aged male, D.S., presented with a complain on blurred vision and feeling of yellow spot in front of right eye. His professional occupation is director-manager of the local post office. His visual acuity measured with Snellen were 20/20 on both eyes, intraocular pressure were within normal ranges 17 mmHg on the right eye and 18 on the left eye. Amsler grid on the right eye has shown distorted lines in upper quadrants of the central visual field, on the left eye test was normal without changes. Slitlamp biomicroscopy of anterior segment of the eye has been normal on both sides. Indirect ophthalmoscopy with the loupe of 90D (Volk, USA) has shown an oval elevation of neurosensory retina at the posterior pole with the borders which were outlined with glistening reflex. He was admitted to intravitreal injection of 1.25 mg bevacuzimab (Avastin, La Roche) under standard intravitreal drug application protocol. After 4 weeks patient has shown up with the complaint that his vision got better but he still had a feeling like he was "watching through the cellophane". His visual acuity has remained measured with Snellen 1.0. Intraocular pressure on the right eye was 13.5 mmHg and 12 mmHg on the left eye. Amsler grid test was normal without distortions of lines on the right eye. Indirect ophthalmoscopy on the right eye has shown slightly blurred foveolar reflex.

Central serous retinopathy (CSR) is usually described as unilateral, localized detachment of the sensory retina at the macula with or without retinal pigment epithelium (RPE). Bevacuzimab as non selective anti VEGF has profound effects on vascular permeability; it ameliorates choroidal permeability in CSR.

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**P3:  
OCULAR DIROFILARIASIS: A CASE REPORT**

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A case of ocular dirofilariasis in a 76 old female patient is presented.

A zoonosis caused by parasites of genus *Dirofilaria* is relatively rare in humans, with a higher incidence in south and central Europe, Asia and Africa. *Dirofilaria* is a parasite found in dog, cat, racoon and bear. The parasite replicates in the animal's body and parasites are transmitted to humans by insect bites, mostly mosquito bites. When transmitted to humans, the parasite is found in the skin and subcutaneous tissue, mucous membranes, and less frequently visceral organs.

The 76 old female patient presented to outpatient ophthalmology clinic for occasional sensation of pain, rubbing and redness in her right eye. Initial therapy was introduced, resulting in short-lasting improvement. In two weeks, the patient was re-examined for recurrence of discomforts. Slit lamp examination performed temporally revealed a whitish motile, live parasite under the injected and chemotic bulbar conjunctiva. Upon surgical extirpation of parasite, the diagnosis of dirofilariasis was verified by microbiologic identification.

**P4:  
PROTEIN C, HYPERHOMOCYSTEINEMIA, GLYCOGEN PHOSPHORYLASE ISOENZYME BB AND  
EXUDATIVE AGE-RELATED MACULAR DEGENERATION**

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**INTRODUCTION:** Age-related macular degeneration (AMD) is a chronically, progressive, probably multifactorial and bilateral disease that leads to disorders of central vision. It is the cause of loss of sight in 50% cases of all registered blind and person with bad sight in the world. Prevalence of severe sight loss increases with age. Results Framingham Eye Study indicate that AMD has 2% of Americans (people from USA) in the age of 52-64 years, 11% is aged 65-74, while 28% of Americans have AMD aged 75 years. The final stages, blindness was found in 1,7% of patient with AMD over 50 years of life and in approximately 18% of patients with more than 85 years of life. Senile macular degeneration can be in two forms atrophic and exudative (neovascular). Atrophic AMD is caused by atrophy of photoreceptors, retinal pigment epithelial (RPE), and choroid. Exudative form of AMD occurs because of choroidal neovascularization, which originates in choroid and grows through defects in Bruch's membrane. Choroidal neovascularization can only remain limited to the subretinal space (type 1), or that later spread to subretinal space (type 2).

**AIM:** Prove that there is correlation with AMD protein C and homocysteine in plasma.

**Material and methods:** Protein C and homocysteine in plasma, we set at two ophthalmological patients (exudative AMD patient I, while the patient II ophthalmological randomly selected patients without macular disease) in the Clinical Centre of Montenegro (on 03.04.2009., protocol number 549 and 551). Optical coherence tomography is carried on the patient and Milos Clinic in Belgrade on the appliance Zeiss Stratus OCT.

For determining the glycogen phosphorylase isoenzyme BB (GPBB) we used the Diagenics Diacordon POCT test. Reference values for protein C 70-140%, while for homocysteine in plasma 4,75-14,05 umol/L.

**RESULTS AND DISCUSSION:** Patient with exudative AMD (patient I) had on the day in determining protein C 149,8% or 9,8% more than the baseline, while the value of homocysteine in plasma was 16,62 umol/L or 2,57 umol/L, which is higher than the reference value. Randomly selected patient (patient II) had a normal value of the protein C (64,3%) and homocysteine in plasma (13,91 umol/L). Glycogen phosphorylase isoenzyme BB was not isolated for patients.

**CONCLUSION:** In addition to day known risk factors for exudative AMD seriously be reckoned as in higher values of protein C in plasma homocysteine are important risk factors. For this reason need to make bigger study and get the time for quick start of therapy. Diacordon test has no significance at exudative AMD.

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**P5:  
ACUPUNCTURE AND HOMEOPATHY IN OPHTHALMOLOGY**

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While many ophthalmologists struggle to treat certain eye conditions or have only limited tools to aid them, it is important to know about other ways to gently treat delicate eye tissues with complementary medicine therapies such as Acupuncture and/or Homeopathy. Acupuncture is a treatment method that originated more than 3,000 years ago in China. The rationale behind acupuncture is that there is an energy flow (Qi) along specific channels throughout the body. According to this theory, disease occurs when there is too little or too much Qi or when the flow is blocked or interrupted. Stimulation of acupuncture points corrects the imbalance of energy flow. Homeopathy is an empirical system of medicine established by Samuel Hahnemann in early 19th century. This name, originated from the Greek words homoios (similar) and pathos (suffering), explains the basic and most important law of healing in homeopathy, called the "Law of Similars": Drugs which produce symptoms in a healthy person will treat those symptoms in a disease state. There is a very strong history of homeopathy and acupuncture used in Ophthalmology. Both therapies have been reported for treating and alleviating a variety of ocular conditions, including AMD, cataracts, infections, injuries, dry eye, myopia, etc.

**P6:  
IRIS BICOLOR-PRIKAZ PACIJENTA**

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We present a case report of female patient F.Z., date of birth 1958, in Tuzla, Bosnia and Herzegovina. Patient has noted two different eye colors in one eye. Although some patients have pigment changes involving entire iris (complete heterochromia or heterochromia iridis) our patient has pigment changes involving only one iris segment (partial heterochromia). Most cases of heterochromia are sporadic and benign. Congenital heterochromia occurs in variety of syndromes. Acquired heterochromia can be caused by ocular trauma, foreign body, melanoma, nevus and some drugs used in glaucoma treatment, as well.

Patient has reported that she has been noticed two different colors of her right eye for at least two last years. She has been received as patient in Policlinic for Eye Disease at Public Health Institution Tuzla, since 1980, where ocular hypertension was diagnosed. Since 2003 patient has been receiving medical treatment (non-selective beta blockers) for glaucoma and therefore any of these kind of anti glaucoma therapy has not been reported for consecutive heterochromia iridis. During a regular medical checkup, doctor has been suspected that a patient has a melanoma malignum of her right eye. The patient was sent for further diagnostic test including ultrasound of her eyes. The ultrasound revealed no melanoma malignum.

Patient is advised to be followed by ophthalmologist regular, due the possible malignancy.

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**P7:****PREOPERATIVE RETINAL LASER PHOTOCOAGULATION SIGNIFICANTLY IMPROVE THE RESULTS OF VITRECTOMY****Stefanovic D.***Special Hospital "Sveti Vid", Belgrade  
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**INTRODUCTION:** Panretinal photocoagulation is effective method in the treatment vasoproliferative diabetic retinopathy. The aim of the investigation is to assess the significance of preoperative laser photocoagulation (LFC) in the prevention of postoperative complications.

**PATIENTS AND METHODS:** Retrospective analysis of preoperative data and operative protocol pars plana vitrectomy (VPP) in proliferative diabetic retinopathy, and correlation of anatomical and functional results of operation in patients with or without preoperative LFC.

**RESULTS:** The study included 73 eyes (66 patients) with performed VVP. Indications for operative treatment were hemophtalmus, traction ablation of rethyna and combination of hemophtalmus and traction ablation of rethyna. Patients were divided into two groups. In the first group LFC was not performed – 15 cases. In the second group LFC was performed – 58 cases. In 42 patients both Phaco+IOI were done and in 9 patients Phaco+IOI were don due to the evacuation of silicon oil. During VPP tamponade were performed in 39 patients with silicon, in 18 patients with gas, in 3 patient with air and in 13 patients with liquid. In 7 cases early vitrectomy was done (due to the hemoptalmus). Follow up period after vitrectomy was from 1 to 36 months. Reoperation was needen in 7 eyes (46.6%) in 1st group and in 3eyes in the 2nd group.

**CONCLUSION:** Our results show significant role of preoperative fotocoagulation in prevention of complications after vitrectomy. Patients with performed LFC had better postoperative course, anatomical result and visus.

**P8:****CHANGE OF REFRACTION FOLLOWING SURGICAL TREATMENT OF ESOTROPIA****Zvizidić D, Halimić-Alajbegović J, Alendar M.***Eye Clinic, University of Sarajevo Clinical Centre, Sarajevo  
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**INTRODUCTION:** Surgical treatment of concomitant strabismus can cause change refraction on the treated eye. According to preoperative findings of refraction, most frequently hypermetropia , we expected that refraction be with hipermetropic astigmatismus

**PURPOSE:** Our aim was to evaluated refraction before and after operative treatment of esotropia.

**MATERIAL AND METHODS:** We retrospectively reviewed 216 patients whose esotropia was corrected by operative treatment on one or both eyes. All patients had determined refraction before perform of surgical treatment. Final cycloplegic refraction was performed 15 days after operative treatment and determined spectacles.

**RESULTS:** At presentation, 162 (75%) of the 216 patients were with hypermetropic astigmatismus following surgical treatment. 54 (25%) were with myopic astigmatismus. Some of patients with preoperative finding of emetropia had postoperative outcome with hypermetropic astigmatismus.

**CONCLUSION:** This change of refraction is common finding after operative correction of lateral and medial rec-tus muscle and may be caused by changes of distortion of cornea and chngange of visual axis.