

IS06**Communication for every child - the role of ICT in promotion of communication and education of young children with developmental disabilities**

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Early childhood intervention is a well known concept that promotes integrated and coordinated services for children in the preschool period and their families. In Croatia the services of early intervention are divided into several systems (health, social welfare, education, non-governmental system) and the procedures of early assessment and services are not equally distributed within the country. The parents of young children in Croatia still struggle for services and information. As it is important to provide support for all children at risk and disseminate knowledge about evidence-based practice, the professionals from two faculties from University of Zagreb (Faculty of Education and Rehabilitation Sciences, Faculty of Electrical Engineering and Computing) joined their forces and started a year long interdisciplinary collaboration (<http://www.ict-aac.hr/index.php/hr/>). This team conducted several projects together focused on ICT solutions for children with complex communication needs. Some of the projects were supported by UNICEF Croatia and Communication for every child is one of them. The goals of the mentioned project were to (1) strengthen the capacities of professionals and institutions in providing Alternative and Augmentative Communication with children 0-8 years, (2) making the assistive technology and software solutions available for children 0-8 years and their families. The presentation will cover the concept of early intervention and a necessity of interdisciplinary collaboration between the systems, the type of children that require support as well as an overview of the project Communication for every child.

IS07**Glaucoma - approaches and challenges in its treatment in the future**

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Glaucoma is a multifactorial optic neuropathy in which there is a characteristic acquired loss and damage of retinal ganglion cells, resulting in optic nerve damage and visual field defect. The disease is progressive and asymptomatic, and many (large number) of patients are not even aware of the disease. It is the second most common cause of blindness worldwide and a significant public health problem.

Glaucoma treatment is a big challenge because it should be focused on neuroprotection. Direct neuroprotection is supposed to specifically affect the ganglion cell death rate and/or the neuroregeneration of damaged cells. Gene and cell therapy drugs offer new opportunities to address unmet medical needs and improve many diseases and injuries. Although investigations of neuroprotection and neuroregeneration in glaucoma are advancing, unfortunately, it is still impossible to apply them in clinical practice.

As glaucoma is a multifactorial optic neuropathy, it is challenging to determine the target risk factor in gene therapy. The question arises whether a new field of modern science, which is already widely applied, can solve this challenge. The role of Big Data, Deep Learning, and Artificial Intelligence (AI) in medicine is still being sought. Can we build better health profiles and better predictive models around individual patients to diagnose better and treat the disease if we use that information? AI technology has evolved rapidly in recent decades. There is more and more talk about the role of AI in medicine. Ultimately, it still seems that AI cannot replace us as doctors. The doctor still manages the processes, and the AI serves us as a virtual assistant. I believe in humanity and the inability to replace the human factor, but I accept that new insights and information processing can help us significantly to improve the treatment of challenging multifactorial diseases such as glaucoma.

Until then, glaucoma is still treated using indirect neuroprotection through protecting the optic nerve by reducing risk factors. One of the most critical risk factors for the development of glaucoma is elevated intraocular pressure (IOP) (pressure above 22 mmHg). Glaucoma treatment should be individualized in selecting therapy tailored to the patient's individual needs (following the IOP targets). Elevated IOP can be decreased with drug therapy, laser procedures, or surgical techniques. It remains us to improve the medical treatment of glaucoma with improved drugs prescription, new ways of drugs application, and new antiglaucoma drugs. In laser treatment, new generations of more tissue-sparing and focused lasers are used, while in surgical treatment, new techniques are introduced that are less invasive and new microdevices that regulate intraocular pressure.

In the field of glaucoma, science is advancing significantly, and the disease is detected more accurately and earlier, and it is treated significantly more individually. Hopefully, it will no longer be called a disease that is the second leading cause of blindness in the future.