

infection, 25.3% had indicators of primary infection, the rest (19.6%) had serological patterns that might have benefit from additional tests, such as avidity tests, western blot or PCR.

Key words: infectious mononucleosis, children, laboratory diagnosis

45. THE ROLE OF BRAIN PLASTICITY IN THE PROCESSES OF RECOVERY OF MULTIPLE SCLEROSIS

Doina Ropot

Scientific adviser: Ion Moldovanu, MD, PhD, Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

Introduction: Neuroplasticity refers to the potential that the brain has to reorganize by creating new neural pathways to adapt, as it needs. Think of the neurological changes being made in the brain as the brain's way of tuning itself to meet your needs. The more you focus and practice something the better you become at the new skill that you are learning or an obstacle you are trying to overcome. By doing this new neural connections are created in the brain as synapses that don't usually fire together do, which help us to sharpen our new skill.

Materials and methods: Motor symptoms are common and disabling across the phases and forms of multiple sclerosis. Disease modifying treatments help to prevent their development, but most of their management is through rehabilitation. Current rehabilitation approaches are based on physical therapy tailored to the individual's needs. The efficacy of these approaches, however, is limited, as it is purely based on clinical grounds, and is largely unpredictable in the individual case, where several factors, including location, extent, and severity of multiple sclerosis damage, can contribute to individual variation in rehabilitation outcomes. Therefore, an improved understanding of the neural processes underlying functional recovery and driven by rehabilitation, as well as the development of novel recovery interventions that fully exploit the individual patient's potential to recover motor function remain a clinical necessity and a research priority.

Discussion results: Rehabilitation of the damaged brain can foster reconnection of damaged neural circuits in multiple sclerosis. Learning mechanisms play an important part in this. We studied a triage of post-lesion states, depending on the loss of connectivity in particular circuits. A small loss of connectivity will tend to lead to autonomous recovery, whereas a major loss of connectivity will lead to permanent loss of function; for such individuals, a compensatory approach to recovery is required. Empirical data are implemented in a neural network model, and clinical recommendations for the practice of rehabilitation following brain damage are made.

Conclusion: Cortical reorganization has been demonstrated in the motor network that mediates performance of a motor task in patients with multiple sclerosis. Rehabilitation of motor function is a major component of management that is supported by neuroplasticity, the brain's ability to adapt to multiple sclerosis damage or disability. The need for novel rehabilitation approaches, underpinned by promoted and enhanced neuroplasticity, challenges traditional experimental designs. This challenge can be addressed using methodological advances, especially in neuroimaging, which allow improved understanding of mechanisms and detection of intervention effects.

Key Words: Neuroplasticity, multiple sclerosis, cortical reorganization, rehabilitation.

46. GASTROINTESTINAL BLEEDING IN CHILDREN A SERIOUS PROBLEM OF HEALTH

Nicoleta Gimiga, Claudia Olaru, Raluca Stanca

Scientific adviser: Smaranda Diaconescu, *Grigore T. Popa* University of Medicine and Pharmacy, Iasi, Romania

Introduction: Gastrointestinal bleeding, especially in children is an alarming event for parents and children, sometimes with dramatic consequences requiring quickly diagnosis and therapeutic approach. The objective of the research is identification of clinical, endoscopic, etiological characteristic of children diagnosed with upper and lower gastrointestinal bleeding.

Material and methods: It was conducted a descriptive retrospective study over a 3 year period (January 2012 to December 2014) on 107 children aged 1-18 years hospitalized for gastrointestinal bleeding in "St. Mary" Children's Emergency Hospital, Iasi. The study group does not include gastrointestinal bleeding from surgical emergencies, infectious diseases, intestinal diseases with immunological or toxic mechanism. Individualized retrospective analysis included historical data, clinical, endoscopic and targeted for etiologic diagnosis of gastrointestinal bleeding. All patients were investigated by upper gastrointestinal endoscopy/colonoscopy after the procedure was explained and informed consent was obtained.

Results: From the batch of 123 children, (45.5%) presented with upper gastrointestinal bleeding (UGIB), and 68 (51.2%) presented with lower gastrointestinal bleeding (LGIB), in four cases the source of bleeding was not identified. The main etiological aspect of UGB was erosive gastritis 33.9%, oesophagitis in 10.71%, duodenitis in 21.42%, gastric 8.9%, duodenal ulcers 7.4% of cases, Mallory-Weiss syndrome in 5.3%, multiple etiology in 10 cases 12.5%. Causes of LGIB were colorectal polyps in 31.5%, ulcerative colitis 9.5%, nonspecific lesions in 25.3% anal fissures 14.2%, intestinal polyposis syndrome 4.7%. It was practiced concomitant endoscopic surgery for rectal polyps.

Conclusions: Lower gastrointestinal bleeding was the most common causes related to minor conditions: colorectal polyps, anal fissures, nonspecific lesions. Non-variceal gastrointestinal bleeding the most common form Associated with erosive gastritis, esophagitis, duodenal ulcer, gastric ulcer. Endoscopy proved to be a useful investigation in the diagnosis of gastrointestinal bleeding and a therapeutic useful tool in certain cases.

Keywords: gastrointestinal bleeding, children, etiology, endoscopy, colonoscopy