SECTION OF CLINICAL MEDICINE #3 (PSYCHIATRY, NARCOLOGY, NEUROLOGY, MEDICAL PSYCHOLOGY)

СЕКЦІЯ КЛІНІЧНОЇ МЕДИЦИНИ №3 (ПСИХІАТРІЯ, НАРКОЛОГІЯ, НЕВРОЛОГІЯ, МЕДИЧНА ПСИХОЛОГІЯ)

CLINICAL AND NEUROLOGICAL FEATURES OF NIPAH VIRUS AND ITS EFFECTIVE TREATMENT AND PREVENTION IN KERALA (INDIA)

Prakash M. D., Kampil P. S.
Scientific adviser: assoc. prof. Kabachna I., PhD
V. N. Karazin Kharkiv National University
Department of Neurology
Kharkiv, Ukraine

Introduction. Nipah virus (NiV) is a highly lethal zoonotic negative strain single stranded RNA Paramyxovirus belonging to the Henipa virus genus capable of causing severe neurological and respiratory infection with ability of devastating rapid morbidity and mortality around 89%. The most challenging part of NiV is that it is classified as BSL-4 agent for being deadly pathogen and there is no vaccination and treatment protocol recommended by WHO. Also, it exhibits normal flu like symptoms in the early stages and similar symptoms of Japanese encephalitis and dengue in the later stages, which reduce the chances of early diagnosis.

Aim of the research. Firstly, The awareness of NiV to the medical world about the clinical and neurological features of this disease for the early diagnosis. Secondly, to bring forward the kerala (India)model of treatment and effective management strategies for the prevention of this disease

Methods and materials. Nipah virus has identified in Malaysia, Bangladesh and India. It affect Kerala (India) during the period of May –June of 2018 and 19 peoples were affected. Patients showed clinical signs like headache, fever, vomiting, dizziness, impaired level of consciousness, reduced reflex, ARDS, seizures, segmental myoclonus, agitation, focal neurological signs, encephalitis, oculomotor palsy, cervical dystonia, facial paralysis, lower cranial nerve involvement, leading to coma and death. Out of 19, only 2 survived the deadly virus. The confirmatory tests used were real time PCR and ELISA. Treatment methods include wide range of broad spectrum antiviral drugs including Ribavirin, Favipiravir, Chloroquine…along with symptomatic treatment.

Management strategies include special isolation ward, ambulance service, specialized medical team for Nipah patient with fully equipped PPE-kit and N-95 mask. Personal and hospital hygiene has been take special care, fumigation of the suspected areas. Community and contact surveillance of the suspected persons was done along with general public awareness about the disease and its precautions.

Results. The main clinical manifestation of Nipah patients were fever (100%), vomiting (89%), ARDS (94%), seizure (63%), encephalitis (94%), agitation (52%), altered level of consciousness (89%). Along with clinical signs, diagnostic reports and isolation of NiV from CSF of the patient confirm its involvement of the brain.

Conclusions. The statistical study of the clinical neurological symptoms and advanced analysis reports shows that the virus replication takes place in brain. The success of Kerala (India) model is early diagnosis and prevention of further spread of the infection.

NEUROFILAMENTS IN CEREBROSPINAL FLUID OF MULTIPLE SCLEROSIS PATIENTS: ASSOCIATION WITH DEMOGRAPHIC FACTORS AND CLINICAL SYMPTOMS

Motiekaityte R.
Scientific advisers:assoc. prof. Kizlaitiene R., PhD, assoc. prof. Giedraitiene N., PhD, assoc. prof. Bagdonaite L., PhD; Bukina V.
Vilnius University
Department of Neurology, Vilnius University Hospital Santaros klinikos
Department of Physiology, Biochemistry, Microbiology and Laboratory Medicine
Vilnius, Lithuania

Introduction. Neurofilaments are the intermediate filaments of nerve cells, also one of three classes of cytoskeletal polymers that comprise the nerve cell cytoskeleton. Neurofilaments are released into cerebrospinal fluid (CSF) heralding axonal injury as a result of neurological degenerative diseases, including multiple sclerosis (MS).

Aim of the research. To determine the concentration of neurofilament light chain (NF-L) in CSF of patients with multiple sclerosis (IS) and demyelination, to evaluate its correlation with clinical and demographic parameters of the subjects.

Materials and methods. Patients with diagnosis of MS or demyelinating disease ((n = 49), 32 (65%) females; mean age 37 ± 9.7 years), admitted to Department of Neurology in 2018 February – November were included in the study. With the approval of the VULSK Commission of Ethics, demographic and clinical data of the subjects were collected retrospectively and levels of NF-L in CSF were measured by immunoassay. Subjects were divided into age groups (<29, 30-39, > 40 yr.), disability levels based on Expanded Disability Status Scale (EDSS) scores (<2.5, 3-3.5, > 4) and presence of oligoclonal bands (OCBs) in CSF (OCBs + / OCBs -). The correlation between collected data and the concentration of NF-L in CSF was analyzed. For data analysis Statistical Analysis SPSS software were used, the statistically significant differences between groups were considered at an adjusted $p < 0.05$.

Results. In the studied sample, the median concentration of NF-L in CSF was 705.3 pg / ml (min. 223.14pg / ml, max. 5576.72pg / ml). Difference between mean values of NF-L among three age categories was statistically significant ($p = 0.01$). The highest median value was observed in the youngest group (998.53pg / ml). NF-L levels in CSF of patients with IS diagnosis were significantly ($t = 4.935$, $p < 0.0005$) different from those diagnosed with demyelination (medians