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Lidia M. Nagae
International Scientific Advisor

RE: Olga An, PhD candidate

Olga An presents her dissertation based on an original prospective observational cohort study to be considered for defense. I have known Olga since 2017, when she started her PhD's thesis under my advisory. I worked with Dr An on her study of novel approach for the outpatient management of quite common self-limited childhood epilepsies in view of patients' health-related quality of life.

World Health Organization recognizes that epilepsy social stigma is a major public health concern. Experts now acknowledge the importance of treating the "whole child," rather than simply treating the seizures. In her research Olga sought to use quality of life as a measure of success of antiepileptic treatment at the primary health-care level. Benign focal epileptiform discharges of childhood are a genetically determined electroencephalographic trait and almost all patients have resolution of their epilepsy by the time of puberty. These age-dependent EEG-patterns are associated with self-limited childhood epilepsies, childhood epilepsy with centro-temporal spikes (CECTS) in particular. Self-limited focal epilepsies as the most common class of epilepsy syndromes in the pediatric age group would be expected to accidentally occur in patients with other neurological conditions with structural brain abnormalities. Age-dependent focal epilepsies can coexist with an underlying brain lesion, causing motor impairments such as cerebral palsy. According to Olga's study, it has been proven that some children with cerebral palsy due to white matter injury should not be excluded from CECTS treatment approaches and directed instead to clinical pathways with more aggressive and prolonged therapy for "symptomatic epilepsy".

In case of CECTS, anti-seizure medication should be evaluated in terms of its role in reducing seizures, preventing the evolution to atypical forms, or reducing possible negative cognitive consequences associated with epileptiform activity versus the risk of side effects and impact on quality of life. It is difficult to measure whether preventing seizures improves health-related quality of life (HRQOL) in comparison to the side effects of antiepileptic treatment via therapeutic drug monitoring and regular follow-up visits to a clinic, however, HRQOL assessment seems to be a reasonable start. Along with traditional criteria such as the type, severity, and frequency of seizures, HRQOL is an integral indicator of the entire complex of organizational, diagnostic, and therapeutic measures.

During her PhD, Olga confirmed her ability to perform high-grade research, already evident in her poster presentations at several International Medical Conferences. Results of the thesis were of a quality sufficient for publication at some reputable international peer reviewed medical journals.

The presented results and proposition of the PhD-thesis have scientific significance and novelty in terms of the public health development in Kazakhstan.

In conclusion, I confirm that I have reviewed Olga's English publication and the dissertation should be complete and ready for defense.

Sincerely,

Lidia Nagae

Lidia Mayumi Nagae

MD, PhD, Associate Professor of Radiology (formerly at the University of Florida, Gainesville, FL, USA and Banner University Medical Center, Tucson, AZ, USA), presently at Radiology Ltd, Tucson, AZ, USA.