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Histomorphological effect of lamivudine on the cerebellum of Wistar rats

Lamivudine is an anti retroviral drug used for the treatment of HIV-1 and hepatitis B. It is one of the essential medicines needed in a basic health system. This study was carried out to investigate the detrimental effect of lamivudine on the cerebellum based on the adverse effects of gait disorders manifested by patients using lamivudine. 20 male Wistar rats divided into two groups of ten rats each were used for the study. Control group A was administered with 1 ml of distilled water, while treatment group B was treated with 4.28 mg/kg of lamivudine daily for 30 days. The rats were handled carefully according to the guidelines for treatment of laboratory rats by ACURET. On the 30th day, the rats were humanely sacrificed and each cerebellum was harvested immediately. The cerebella were put through routine tissue processing for H/E staining with Glial fibrillary acidic protein (GFAP) immunohistochemistry method. The resulting specimens were mounted with digital picture exchange (DPX) and viewed under the light microscope at 400x. Photomicrographs showed shrunken Purkinje cells and distorted granular layer in the cerebellum of group B rats while those of group A rats were healthy. This correlated with the higher staining intensity for GFAP in the granular layer of group B rats suggesting cellular inflammation and damage. More research is needed to ascertain the molecular mechanism of these distortions.

Biography

Kudighe Patrick Udoh has completed her BSc in Anatomy from the University of Uyo and PgD from the National Open University of Nigeria. She is currently doing her MSc Anatomy at the University of Uyo. She is a Lecturer in the Community Health Officer's Training School, University of Uyo Teaching Hospital, Uyo, Nigeria. She has published one paper in a reputed journal.

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