ABSTRACT  It was noted that aluminium had been implicated in the etiology of certain neurotoxic disorders, but definitive studies relating diet to these conditions were lacking. The histological effect of aluminium administration were studied in 16 male rats (Rattus sp). The rats were randomly divided into 4 groups. Group K1 received normal ration considered to be the control group. The group K2, K3, and K4 were treated orally with aluminium sulphate in concentration of 500, 1500 and 3000 ppm respectively for 30 days. In one day after treatment, all rats were sacrificed, the brain were excised for macroscopic and microscopic examinations. Microscopic slides were prepared applying the paraffin method and routine hematoxilin-eosin staining (HE) was carried out. The effect of multi dosage of aluminium administration for as long as 30 days showed histological changes of the cerebrum and cerebellum. The cerebrum and cerebellum showed circulation disturbance (hyperemia and hemorrhage) and metabolism disturbance (degeneration) of pyramidal cells of the cerebrum and degeneration of Purkinje cells in the cerebellum. Histological changes in the cerebrum were oedema between nerve fibers, while in the cerebellum necrosis (vacuoles) were found in the cortex of the granular layer only in the group K3.