

The histological changes in rat's brain with alcohol are potentially due to activation of Cerebral NLRP3 Inflammasomes

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BACKGROUND: Chronic alcoholism is associated with impaired cognitive function and remarkable histological changes.

AIM OF THE WORK: To demonstrate whether the histological changes associated with chronic alcohol ingestion are due to activation of Cerebral NLRP3 Inflammasomes by miRNA155 or not.

MATERIALS AND METHODS: Sixteen male Wistar rats were used. They were divided into 2 groups. Group I; the control naïve group, group II; chronic alcohol ingestion (10g/kg/day). Brain biochemical and histological studies were done. **RESULTS:** Alcohol induced cognitive impairment with increasing the expression of miRNA155, NLRP3, IL-1 β and caspase-8 immune-reaction. **CONCLUSIONS:** alcohol could aggravate cognitive dysfunction via targeting NLRP3 inflammasomes pathway and its epigenetic regulator miRNA155.

CONCLUSIONS: MiRNA155 could be a molecular marker and therapeutic target in alcohol dependent patients for early detection and prevention of cognitive dysfunction.

Biography

Dalia Alaa El-Din Aly El-Waseef Egyptian, Graduated at Faculty of Medicine, Ain Shams University-Cairo-Egypt (1998). Working at Department of Histology and Cell Biology since 10/2000. Assistant Professor at Department of Histology and Cell Biology since 3/2019 till now. Has several international publications and speaker at several international conferences. Has one published book in the field of histology.

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