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Brain CT-Scan Features in Methanol Toxicity and Their Association with Clinical Manifestations and Outcome; a Cross-Sectional Study

Saeid Esmaeilian[1], Meisam Hoseinyazdi[2], Arash Teimouri[1], Reza Jahankhah[1], Golnoosh Ansari[2], Masoumeh Ardeshiri[1], Faranak Rafiee[1], Elham Mohajeri[3], Farzaneh Ghazi Sherbaf[2], Sedighe Hooshmandi[1] Mohammad Hossein Nikoo[4] Behnam Kian[1] Mehrdad Kayedi[1]

[1]Medical Imaging research center, Shiraz University of Medical Sciences, Shiraz, Iran

[2]Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins Hospital, Baltimore, Maryland, USA

[3]Health Policy Research Center, Institute of Health, Shiraz University of Medical Sciences, Shiraz, Iran

[4]Non-Communicable Disease Research Centre, Shiraz University of Medical Sciences, Shiraz, Iran

ABSTRACT

Purpose: Early month of the COVID-19 pandemic. The belief of alcoholic beverages as a protective factor against the virus was got viral. We experienced a methanol toxicity outbreak by illegally produced beverages. We had insufficient data about Imaging and clinical finding in Methanol poisoning. We aimed to determine the frequency and importance of each brain finding its clinical manifestation with the prognosis of patients. **Methods:** in this cross-sectional study, we retrospectively assessed methanol toxicity patients in March and April 2020 at Shiraz Teaching Hospitals. We recorded demographic data, clinical manifestations, vital signs, duration, Lab data, and outcomes. Brain CT scan was reviewed by three clinical radiologists, independently. Brain CT scan results, including hemorrhage, hypodensity, and location of findings, had collected. All data analyzed by *chi*^{2}, *T*-test, and Pearson test was used for assessing correlation. **Results:** 306 patients had entered. There were 268 (88.88%) male patients. The total mean age of 32.10±9.9 years. 65 (21.8 %) with GCS< 8 were hospitalized mean duration of 2.72±2.46 days. 60(19.9%) patients passed away. about 75.9% (223) blindness, 128 (49.2%) Chronic alcohol users 46(15%) cases with abnormal findings. 30(50%) dead persons had normal imaging. There were 5(1.6 %) ICH Hypo Putamen 34 (11.11%) and diffused cerebral edema 23(7.5%), cerebellum nucleus hypoattenuation, and hemorrhage were the poorest prognosis findings in the CT scan. **Conclusion:** about 15% of patients had abnormal CT scans, Putamen hypodensity, Cerebellum nucleus hypodensity, and diffused cerebral edema were the most finding. Cerebellum nucleus hypodensity, diffused cerebral edema and ICH are the most faithful brain findings. Blindness, Renal failure, GCS<8, and pH<7.2 were the most faithful findings in the final prognosis.

Keywords: Methanol Toxicity; Brain CT scan; Clinical Manifestations; COVID-19 pandemic;

RETRACTION NOTE: The article has been retracted by the authors due to correction of the literature.

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