البحث الثالث

The Medicolegal aspects of road traffic accidents (RTAs) and evidence of Tau protein as a prognostic factor.

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Abstract

Background: Road traffic accidents (RTAs) are considered a fundamental public issue in Egypt and are responsible for about 12,000 deaths per year. Due to the increasing number of vehicles, changes in lifestyle, and risky attitude among the general population, RTAs are significant causes of injury and death. Tau protein is a microtubule centralized in the axons of neurons that can be released when there is neuronal damage.

Aim: The aim is to study the medicolegal aspects of the RTAs and detect the possible role of Tau protein as a prognostic factor.

Method: This is a cross-sectional study including 94 victims presented to EL Fayoum general hospital, El Fayoum city, Egypt with RTA from June 2021 to December 2021. Sociodemographic data, information about the accident and the outcomes of victims were recorded. A blood sample was taken and level of serum tau protein was measured for each victim.

Results: The majority of victims were males within the age range of 15-30 years. Collision types of accidents and four-wheel vehicles were predominant. Most of the victims were vehicle passengers and pedestrians, and most of the injuries were limb and head injuries. Tau protein levels were high in head injuries and increased with the severity of the injury and were higher in non survivors than in others.

Conclusion: RTAs pose a significant threat to population safety in Egypt. Tau protein level significantly correlates with the seriousness of head injury and death outcomes.

Recommendations: The study recommends special permits for traffic rules, helmet use and regular road maintenance, and using of Tau protein as a marker for early brain damage in RTAs victims.

Keywords: Pedestrians; Road traffic accidents; Tau protein; Victims