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**"Serial Optic Nerve Sheath Diameter in Mid-to-Moderate Traumatic Brain Injury"**

The term talk-and-deteriorate, also known as talk-and-die, describes a subset of patients who were speaking during their initial provider encounter after sustaining a minor head injury (Glasgow Coma Scale score between 9 and 15), before subsequently deteriorating due to potentially reversible causes and possibly dying. Approximately one-third of mortality in talk-and-deteriorate patients occur within the first 24 hours following trauma. The onset of deterioration begins as late as 12 hours post-injury. Raised intracranial pressure (ICP), which is correlated to the optic nerve sheath diameter (ONSD), is a major contributor of the deterioration. ONSD measurements using ocular point-of-care ultrasound (POCUS) can be quickly performed bedside. Therefore, we hypothesize that an ascending trend in ONSD measurements will be indicative of talk-and-deteriorate phenomenon. Thus, this study will determine whether serial measurements of the ONSD every 3 hours will identify patients with worsening conditions in terms of ICP following emergency department presentation for mild-to-moderate traumatic brain injury (TBI).The goal of this single-center prospective observational study is to investigate the significance of capturing ONSD measurements on admission and every 3 hours in patients with mild-to-moderate TBI in the emergency department setting, and compare with a group of control subjects. Specifically, this study will determine whether POCUS monitoring using serial measurements of the ONSD will identify patients with worsening ICP and decompensation following emergency department presentation for mild-to-moderate TBI.