

# Traumatic Head Injuries Among Children Admitted to Azadi Teaching Hospital in Kirkuk/ Iraq

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## ABSTRACT

Traumatic Head injuries (THIs) among children present a critical public health challenge, particularly in low-resource settings. This cross-sectional study, conducted at Azadi Teaching Hospital in Kirkuk, Iraq, from January to June 2024, aimed to characterize sociodemographic profiles and risk factors associated with pediatric THI outcomes. Data from 170 children (mean age:  $4.03 \pm 3.93$  years) were collected via questionnaires and medical records, analyzed using SPSS v24. Results revealed a predominance of males (58.2%), children aged  $\leq 1$  year (38.2%), Arab ethnicity (47.1%), and urban residency (93.5%). Mortality rates were significantly higher among infants  $\leq 1$  year (15.4%,  $p < 0.001$ ), children of mothers with primary education (20%,  $p = 0.032$ ), and emergency surgical admissions (11.1%,  $p = 0.007$ ). Secondary diagnoses, such as appendectomy (16% mortality) and colostomy (13.3% mortality), also correlated with poorer outcomes ( $p = 0.031$ ). Over 94% of cases involved surgical complications, primarily pain (35.9%) and infection (9.4%). Socioeconomic factors, including lower maternal education and emergency care delays, exacerbated risks, aligning with global disparities in THI management. This study underscores the vulnerability of infants and the impact of socioeconomic determinants on THI outcomes in conflict-affected regions. Findings advocate for targeted interventions, including maternal education programs and strengthened emergency care systems, to mitigate THI-related morbidity and mortality in resource-limited settings. Further research with expanded cohorts is recommended to explore broader epidemiological trends in Kirkuk.

**Keywords:** Traumatic Head Injury, Pediatrics, Risk factors, Socioeconomic disparities, Emergency care, Iraq.

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