



SELFIE-RELATED HEAD INJURIES: A PROSPECTIVE NEUROSURGICAL CASE SERIES

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Abstract

Background: The widespread use of smartphones and social media has led to a new category of trauma—injuries sustained during selfie-taking. India contributes the largest share of selfie-related fatalities worldwide[1], but literature on neurosurgical implications remains limited. This paper presents a prospective case series of selfie-related head injuries, analyzing mechanisms, radiological patterns, management strategies, and outcomes.

Methods: We conducted a prospective observational study of patients admitted with selfie-related head injuries at the Department of Neurosurgery, GRMC & JAH Gwalior, MP, India, between January 2023 and August 2025. Inclusion criteria were trauma sustained during selfie activity, evidence of head injury on CT, and informed consent. Data included demographics, mechanism, site of injury, GCS, imaging findings, management, and outcomes.

Results: Eighteen patients met inclusion criteria (mean age: 22.5 years; range 14–34). Males comprised 72%. Mechanisms included falls from height (61%), road accidents during selfies on motorbikes (22%), and collisions with stationary objects (17%). CT findings showed cerebral contusions (50%), epidural hematoma (22%), subdural hematoma (17%), skull fractures (33%), and diffuse axonal injury (5%). Six patients required craniotomy; two died. Five patients had delayed presentation (>6 hours) due to stigma or remote locations.

Conclusion: Selfie-related head trauma is an emerging and preventable cause of neurosurgical admission in young adults. Policy, behavioral, and technological interventions are essential.

Keywords: Selfie, Head injury, Neurosurgery, Public health, Prevention.

Introduction

The rise of smartphones, particularly those with front-facing cameras, has significantly influenced global social behavior. A notable manifestation of this is the rise of 'selfie culture,' where individuals prioritize visual appeal over safety. India has consistently reported the highest number of selfie-related injuries and deaths[1]. While most incidents are minor or unreported, some result in severe trauma, including traumatic brain injury (TBI). This study focuses on the neurosurgical perspective, analyzing patterns of head injuries sustained during selfie-taking, clinical presentations, imaging findings, and outcomes.



Materials and Methods

- Study Design: This was a prospective observational case series conducted at the Department of Neurosurgery, GRMC & JAH Gwalior, MP, India.
- Study Period: January 2023 to August 2025.
- Inclusion Criteria: Trauma sustained during selfie-taking; Age >12 years; Radiologically confirmed head injury (CT/MRI); Written informed consent.
- Exclusion Criteria: Polytrauma without head involvement; Unclear or unknown mechanism of trauma.
- Data Parameters: Demographics, mechanism, scene, clinical status (GCS, focal deficit), imaging findings, management (conservative/surgical), and outcomes were analyzed.
- Ethical Approval: Approved by Institutional Ethics Committee. All procedures adhered to the Declaration of Helsinki.

Results

Eighteen patients were included (mean age 22.5 years; 14–34 years). Males comprised 72%. Mechanisms included falls from height (61%), road accidents during selfies (22%), and collisions with objects (17%). CT findings: contusions (50%), EDH (22%), SDH (17%), skull fractures (33%), DAI (5%). Six required craniotomy; two died. Five patients presented late due to stigma or remote access. ICU stay >48h in 5 cases.

Outcomes: 13 patients recovered fully (72%), 3 had residual neurological deficits (17%), and 2 died (11%). Figures demonstrate injury distribution and representative NCCT scans.

Figure 1. Mechanism of Injury (n=18).

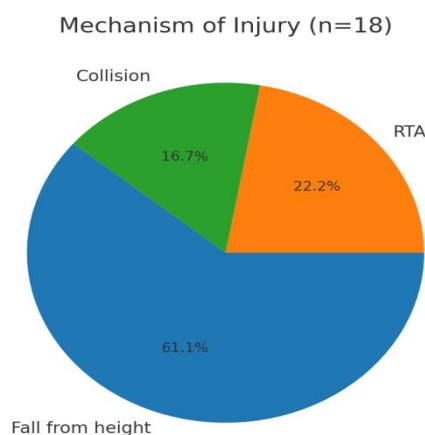
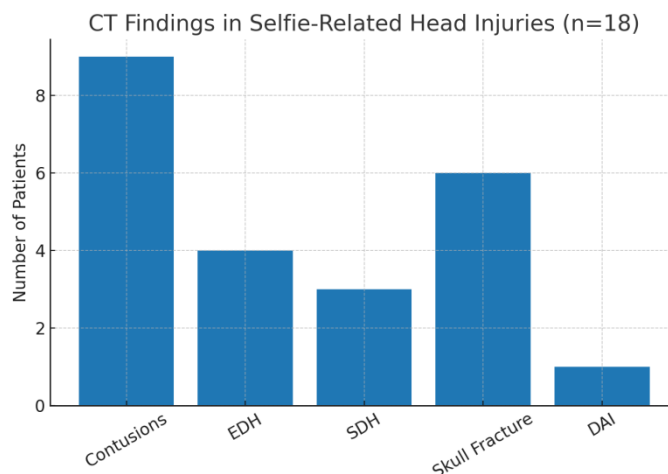
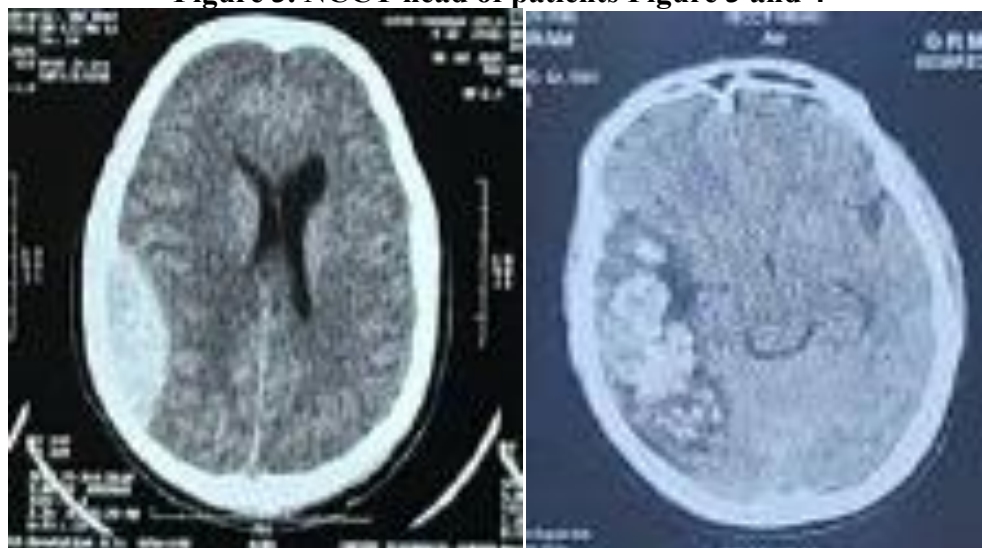


Figure 2. CT Findings in Selfie-Related Head Injuries (n=18).**Figure 3. NCCT head of patients Figure 3 and 4**

Discussion

Media and forensic reports highlight the rising danger of risky selfie behavior. For example, a Japanese tourist died after falling at the Taj Mahal[2]; similar incidents were reported in Sri Lanka (2025)[11] and Spain (2024)[12]. Such events underscore the preventable nature of selfie-induced trauma. Selfie-related trauma is an emerging cause of morbidity and mortality among youth, predominantly males, likely due to risk-taking tendencies[3,4]. Delayed presentations reflect social stigma or lack of awareness. Prevention strategies such as 'no-selfie zones' and digital warnings may reduce incidence.

Conclusion

Selfie-related head injuries constitute an emerging and preventable cause of neurosurgical trauma, particularly among adolescents and young adults. Public awareness, behavioral counseling, urban safety regulations, and smart-device interventions are vital preventive strategies.

Limitations

The study is limited by small sample size, single-center data, and potential underreporting due to stigma. Long-term follow-up was not included. Future multicentric studies are warranted.

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