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Unmet Critical Care Needs in Clinical Toxicology Management in Resource-Limited Areas: Analyzing Mortality Due to Delayed Access to Tertiary Care and Inadequate Provision of Services – A Retrospective Autopsy-Based Study at AIIMS Bhopal

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In resource-limited regions, clinical toxicology management faces significant challenges, leading to potential gaps in critical care provision. Delays in accessing appropriate care and a lack of comprehensive services contribute to adverse outcomes, including increased mortality rates of preventable poisonings and complications.

Objectives:

To analyze the relationship between factors contributing to the unmet critical care needs and mortality among clinical toxicology patients referred to AIIMS Bhopal from resource-limited areas.

Methodology:

Case records of clinical toxicology patients (poisoning, snake bite, therapeutic complications or drug overdose) who underwent autopsy at AIIMS Bhopal, over a period of 32 months (Jan 2021 - Aug 2023) were examined to understand the circumstances leading to their mortality. Relevant patient demographics, medical history, care pathways, and cause of death were extracted from autopsy reports and medical records. The extent of unmet critical care needs, correlation between delayed access to tertiary care and health seeking behaviors were assessed. Un-structured interviews with family members provided insights into factors contributing to unmet critical care needs.

Results:

The contributing factors to unmet critical care needs include 1) Limited Resources: Over 60% of the cases were referred to AIIMS due to the lack of medical equipment, medications, and skilled personnel in healthcare facilities, leading to delayed or inadequate treatment.

2) Financial Constraints: Approximately 45% of cases had financial limitations as a major barrier to accessing comprehensive critical care. Many patients initially sought care in private healthcare settings but later transferred to government facilities due to financial constraints.

3) Transportation Issues: Nearly 30% of cases involved transportation challenges delaying patients' arrival at



AIIMS Bhopal, hindering their access to critical care services.

4) Lack of Awareness: Around 20% of mortalities occurred due to a lack of awareness among patients and their families about the severity of toxic exposures and the need for immediate critical care.

Conclusion:

There is a significant impact of unmet critical care needs on mortality among clinical toxicology patients. The findings have the potential to guide healthcare policies and interventions to improve patient outcomes and the quality of clinical toxicology management.