

List of best Papers

1. **Bhushan D**, Yadav J, Rozatkar AR, Moirangthem S, Arora A. The psychological autopsy: An overview of its utility and methodology. J Neurosci Rural Pract 2023;14:447-52

➤ Study is to provide an overview of the psychological autopsy (PA) research method, including its methodology, uses, limitations, and ethical considerations. The PA is a valuable research method for investigating and understanding suicide. Despite challenges such as recall biases and methodological limitations, it provides insights into the psychological factors associated with suicide and informs suicide prevention strategies. However, conducting psychological autopsies requires careful consideration of ethical issues. Further research is needed to replicate and extend the findings of this study

2. **Bhushan D**, Yadav J, Arora A, Agarwal D, Apte A; Validated Ultraviolet High - Performance Liquid chromatography method for Post-mortem 5-hydroxyindoleacetic acid measurement in human cerebrospinal fluid; Journal of Laboratory Physician, 2023.

➤ Study was to develop a UV-HPLC method for the measurement of 5-hydroxyindoleacetic acid (5-HIAA) in human cerebrospinal fluid (CSF) as a potential biomarker for neurological and psychiatric illnesses, including depressive disorders with suicidal behavior. The study concludes that the developed UV-HPLC method is reliable and effective for measuring 5-HIAA in human CSF. Measuring 5-HIAA levels in CSF can serve as a potential biomarker for neurological and psychiatric illnesses, including depressive disorders with suicidal behavior. This method is promising for clinical and forensic practice to diagnose suicidal cases. Further research is needed

to determine the clinical significance of these findings and the potential for broader application in psychiatry. The paper helps to give a practical, cost-effective methodology to detect CSF 5 - HIAA.

3. **Bhushan D**, Yadav J, Arora A, Rozatkar AR, Shukla; 5-Hydroxyindole acetic acid level in cerebrospinal fluid as a Potential Biological Marker for Suicide and Suicidal behaviour; Journal of Forensic Science International, 2023

➤ Study was to investigate the potential use of cerebrospinal fluid (CSF) 5-hydroxyindole acetic acid (5-HIAA) as a biomarker for suicidal behavior. A total of 71 autopsy cases were included in the study, of which 35 were classified as suicidal cases and 36 as non-suicidal cases. The median 5-HIAA level in the CSF was measured and compared between the two groups. Receiver operating characteristic (ROC) curve analysis was used to establish the diagnostic accuracy and optimal CSF 5-HIAA cut-off levels for discriminating suicide from non-suicide. The median CSF 5-HIAA level was significantly lower in suicidal cases compared to non-suicidal cases (86.27 nMol/lit Vs 107.06 nMol/lit, $p = 0.001$). The ROC analysis revealed a threshold value of 87.64 nMol/lit for 5-HIAA, with a sensitivity of 54% and specificity of 86%. The study suggests that CSF 5-HIAA may serve as a potential biomarker for identifying suicidal behavior. This finding could contribute to the development of more effective prevention and treatment strategies for suicide and suicidal behavior.

4. **Bhushan D**, Sangita M., Majhi R, Sahoo N, Non-Accidental Injury in Children and Role of CFMU - Case Report, J Punjab Acad Forensic Med Toxicol 2022; 22(1) ISSN : 0972-5687,DOI:10.5958/0974-083X.2022.00029.2.

➤ **Case of battered baby Syndrome.** A case of 4 month old female baby brought with history of swelling in left upper arm following vaccination which gradually progress involving both lower limbs followed by rupture of swelling over the right ankle was brought to emergency of AIIMS, Bhopal. X-ray was done and fractures of different stages of fracture healing were seen. The suspicion and diagnosis of battered baby syndrome was made. The case is presented highlighting the role of Clinical forensic medicine unit (CFMU) and handling of such cases where history is often misleading.