IMPACT: International Journal of Research in Applied, Natural and Social Sciences (IMPACT: IJRANSS)
ISSN (P): 2347-4580; ISSN (E): 2321-8851
Vol. 5, Issue 7, Jul 2017, 45-48

CORRELATION OF PMI WITH SODIUM, POTASSIUM, ASCORBIC ACID AND ALKALINE PHOSPHATASE IN VITREOUS HUMOUR

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ABSTRACT

Biochemical and enzymatic changes are observed in the blood and other body fluids such as C.S.F., Vitreous fluid, Synovial fluid, etc. which usually start immediately or shortly after death. In this study, we have tried to find out the correlation of sodium, potassium, ascorbic acid and alkaline phosphatase in vitreous humour with time since death (PMI).

Material and Methods

The present study was carried out in Jhalawar Medical College, Jhalawar. 110 samples were collected in the mortuary of the Forensic Medicine Department & Biochemical analysis was done in the Department of Biochemistry, using Beckman Coulter automated analyser while vitreous ascorbic acid was estimated manually. Data was analyzed on the basis of SPSS20.0 software and results obtained using Student's unpaired t- test.

Results

According to the statistical analysis vitreous potassium increases with time since death, while vitreous sodium, ascorbic acid and alkaline phosphatase do not have significant correlation with time since death.

Conclusions

We observed a linear rise of potassium (K^+) ion concentration in the vitreous humour with an increasing postmortem interval. Correlation of sodium (Na^+) ion concentration, levels of ascorbic acid and levels of Alkaline Phosphatase (ALP) in vitreous humour with post-mortem interval have not been found statistically significant.

KEYWORDS: PMI, K^+, Na^+, Ascorbic acid, ALP