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Blood alcohol concentration in motorcycle fatalities reported to a tertiary care hospital in Sri Lanka

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Background: Motorcycle, the common man's vehicle in Sri Lanka when crashes is fatal due to its inherent instability and absence of an outside shield to absorb energy during a collision. Managing an unstable vehicle after consuming alcohol, a central nervous system depressant, increases the risk of a fatal collision. Research on motor-cycle fatalities and blood alcohol concentrations has not been reported from Sri Lanka earlier.

Objectives: To describe the contribution of blood alcohol concentrations (BAC) to fatal motorcycle accidents.

Methods: A retrospective descriptive study based on post-mortems of motorcycle fatalities referred to a tertiary care hospital from 2010-2014 was done using a pro-forma.

Results: Out of 180 motorcycle accidents reviewed, 166(92%) were riders, 14(8%) were pillion riders. 171(95%) were males and majority (n=142, 79%) were between 20-60 years of age. BAC was requested for 88(49%) and reports were available only for 76(86%) victims. Out of them, 34(45%) had BAC >80mg/100ml. The highest BAC reported was 428mg/100ml with the mean value being 104mg/100ml. Cause of death (COD) given for 78(43%) victims was head injury for 69(38%) multiple injuries. Presence of >25 injuries (p=0.028) and COD given as multiple injuries (p=0.029) were significantly associated with BAC >80mg/100ml.

Conclusions: Having BAC >80mg/100ml significantly contributes to the motorcycle rider being subjected to more injuries in a collision. Since less than half the cases were subjected to BAC analysis, actual magnitude of the problem could be greater than illustrated by the study.