ᵢ ABSTRACT

A case control study was conducted among motorcyclists in Magway Township who had history of motorcycle accidents within three-year periods. The objective of this study was to find out risk factors for severe motorcycle injuries among motorcyclists with history of accidents. One hundred and eighty-eight participants were involved in this study. Cases were motorcyclists with severe motorcycle injuries and controls were those without injury or less severe injuries. Severe motorcycle injury was defined as injury which includes one or more of the following: fracture of any bone, head injury, soft tissue laceration which required surgical repair and fatal injury which was due to direct effect of motorcycle accident but not due to preexisting disease or later complication. Sixty-one cases and 127 controls were chosen consecutively. Interview method was used with semi-structured questionnaires. Background characteristics, human factors, motorcycle factors and environmental factors at the time of accidents were independent variables. Data analysis was done by using SPSS software version 16.0. Among background characteristics and human factors of participants, there were significantly higher odds of severe motorcycle injuries regarding age >25 year (OR=2.54, 95%CI: 1.35-4.80), education level up to high school (OR= 3.06, 95%CI: 1.52-6.14), ≤1 year of driving experience (OR=3.16, 1.07-9.37), >10 years of driving experience (OR= 6.99, 95% CI: 2.29 - 21.27) and under the influence of alcohol (OR=3.67, 95%CI: 1.66 - 8.13). No significant association was found with motorcycle factors among participants. Regarding environmental factors, significant associations were found with night time (OR=2.23, 95%CI:1.20-4.17), highway(OR=4.55, 95%CI: 2.12-9.76), tar road (OR=4.22, 95%CI: 1.68-10.60), dry and good road (OR=3.51, 95%CI: 1.53-8.04), collision with objects (OR=3.17, 95%CI: 1.32- 7.61) and collision with moving motorized vehicle except motorcycles (OR=7.14, 95%CI: 1.69-30.27). Wearing of helmet with chinstrap firmly fastened at the time of accident was significantly associated with head injuries (OR=3.63, 95%CI: 1.04-12.68) but not significantly with severe motorcycle injuries. After logistic regression analysis for highly significant variables, under the influence of alcohol and highway had significant ORs. The results of this study pointed out risk factors for severe motorcycle injuries among motorcyclists in an area where motorcycles were used as the main vehicles for transportation.