

ABSTRACT

Knowledge and Practices of First Responders and Bystanders, on Safe Transportation of Head and Spinal Injury Patients Following Road Traffic Accidents to Neurotrauma Center at the National Hospital of Sri Lanka

Background

Road traffic crashes are an important cause of death and injury worldwide. Patients with suspected head or spinal injury require appropriate assessment, handling and timely transfer during the pre-hospital period. In Sri Lanka, 1990 Suwa Seriya provides island-wide pre-hospital emergency ambulance care, while members of the public may also assist at accident scenes. Evidence describing the early handling and transportation of patients with suspected head and spinal injuries in Sri Lanka remains limited.

Objectives

To describe the knowledge and reported practices of persons involved in the initial handling and transportation of patients with suspected head and spinal injuries following road traffic crashes who presented to the Neurotrauma Centre of the National Hospital of Sri Lanka.

Methods

A descriptive cross-sectional study was conducted at the Neurotrauma Centre of the National Hospital of Sri Lanka. Data were collected using an interviewer-administered questionnaire covering participant characteristics, previous training, transport-related information, knowledge and reported practices. Data were analysed using descriptive statistics and chi-square tests for selected associations.

Results

Among 426 participants, 74.8% (n=315) were male. Participants aged 18–30 years comprised 43.2% (n=187) and those aged 31–40 years 37.5% (n=158). Overall, 90.5% (n=386) had knowledge scores below 50%, while approximately four-fifths had practice scores below 50%. Responder category was statistically associated with knowledge level ($\chi^2=11.35$, df=1, $p<0.01$) and reported practice level ($\chi^2=8.92$, df=1, $p<0.01$). These results describe the study population and should not be generalised to the whole country.

The majority of participants were male (74.8%) and aged below 40 years. Nearly 70% reported no prior formal training in first aid or spinal injury management. Although most patients reached hospital within one hour, unsafe handling practices were common. Inadequate knowledge was observed in 90.5% of participants, while 78.6% demonstrated unsafe transport practices. Improper lifting techniques and lack of spinal immobilisation were frequently reported, even when trained responders were present.

Conclusions

Low knowledge and reported-practice scores were common among participants in this study. The findings support better-defined responder roles, structured training, appropriate pre-hospital protocols and further research using validated tools and direct observation of patient handling and transport.

Keywords:

Road traffic accidents , Head injury , Spinal cord injury, Pre hospital care , First responders, Bystanders, Spinal immobilisation, Patient transportation , Neurotrauma , Sri Lanka.