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The epidemiology of spinal fractures in a level 1 trauma center in Indonesia

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Objectives: Spinal fractures are a public health issue with high morbidity and mortality and significant social and economic impact. The burden of disease can be minimized through effective management and preventive strategies based on basic epidemiological figures. Therefore, this study aimed to establish the epidemiological figures for injuries of the spine that have been operated.

Methods: Data from 2014 to 2021 of spinal fractures were analyzed from the Department of Neurosurgery, Dr. Soetomo General Academic Hospital, Surabaya, Indonesia. The authors recorded and reviewed the prevalence, associated risk factors, management of spinal fractures and output.

Results: The study included 111 patients with spinal fractures who were operated on the emergency operating room (23 patients) and in the central operating room (88 patients). There were 79 males (71.2%), with the highest range at the 41-60 years old, 40.5%. The most prevalent mechanism of injury was falling down from a height of 44 patients (39.6%) followed by road traffic accidents at 29.7% (33 patients). The cervical spine was the most prevalent fracture site, followed by the thoracic spine at 37.8% and 32.4% respectively. Of all spinal fractures 91.8% were unstable fractures, 79.2% underwent posterior stabilization. The mortality rate associated with spinal fractures is 16.2% from trauma cases admitted to Soetomo Hospital undergoing surgery. Patients' sex, fracture anatomical site and the mechanism of injury were identified as risk factors ($p < 0.05$).

Conclusion: The established epidemiological figures for spinal fractures can be used to direct management and preventive strategies and assist health care planning and delivery.

Biography

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