



Maxillofacial injuries in severely injured patients after road traffic accidents—a retrospective evaluation of the TraumaRegister DGU® 1993–2014

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Received: 2 October 2018 / Accepted: 11 July 2019
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Abstract

Objectives It was the aim of the study to analyse the prevalence of maxillofacial trauma (MFT) in severely injured patients after road traffic accident (RTA) and to investigate associated factors.

Materials and methods In a retrospective study, data from patients after RTA by the TraumaRegister DGU® from 1993 to 2014 were evaluated for demographical and injury characteristics. The predictor variable was mechanism of injury and the outcome variables were type of injury, severity and hospital resources utilization.

Results During the investigation period, $n = 62,196$ patients were enclosed with a prevalence of maxillofacial injuries of 20.3% (MFT positive). The injury severity score of MFT-positive patients was higher than in the MFT-negative subgroup (27 ± 12.8 vs. 23.0 ± 12.7). If MFT positive, 39.8% show minor, 37.1% moderate, 21.5% serious and 1.6% severe maxillofacial injuries. Injuries of the midface occurred in 60.3% of MFT-positive patients. A relevant blood loss ($> 20\%$ of total blood volume) occurred in 1.9%. MFT-positive patients had a higher coincidence with cervical spine fractures (11.3% vs. 7.8%) and traumatic brain injuries (62.6% vs. 34.8%) than MFT-negative patients. There was a noticeable decrease in the incidence of facial injuries in car/truck drivers during the study period.

Conclusions Every 5th patient after RTA shows a MFT and the whole trauma team must be aware that this indicates a high prevalence of traumatic brain and cervical spine injuries.

Clinical relevance Even if sole injuries of the face are seldom life threatening, maxillofacial expertise in interdisciplinary trauma centres is strongly recommended.

Keywords Maxillofacial injury · Trauma · Epidemiology · Road traffic accident

Introduction

Epidemiology of facial trauma was reported to vary across the world and depends on social and economic differences [1, 2].

Traffic accidents contribute to the worldwide deaths in a significant way also leading to moderate as well as serious injuries requiring hospitalization [3]. Even if the introduction of seat belts and the improvement of safety systems led to a significant

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