Injury severity resulting from accidents with reversing cars

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Background: Injury severity of e.g. pedestrians or bikers after crashes with cars that are reversing is almost unknown. However, crash victims of these injuries can be seen frequently in emergency departments and account for a large amount of patients every year. The objective of this study is to analyze injury severity of patients that were crashed into by reversing cars.

Methods: Our local accident research unit prospectively documented 43000 road traffic accidents including 234 crashes involving reversing cars. Injury severity including the abbreviated injury scale (AIS) and the maximum abbreviated injury scale (MAIS) was analyzed as well as the location of the accident.

Results: 234 accidents were included into this study. Pedestrians were injured in 141 crashes followed by 70 accidents involving bikers. The mean age of all crash victims was 57 ± 23 years. Most injuries took place on straight stretches (n = 81) as well as parking areas (n = 59), entries (n = 36) or crossroads (n = 24). Accident locations are presented in figure 1. The AIS of the lower extremities was highest followed by the upper extremities, 0.8 ± 0.7 and 0.5 ± 0.6 respectively. The AIS of the neck was lowest (0.1). The mean MAIS was 1.3 ± 0.6 (Figure 2).

Conclusions: The lower extremities show the highest risk to become injured during accidents with reversing cars. However, the risk of severe injuries is likely low.

Figure 1: Accident location of different traffic participants in crashes with reversing cars.

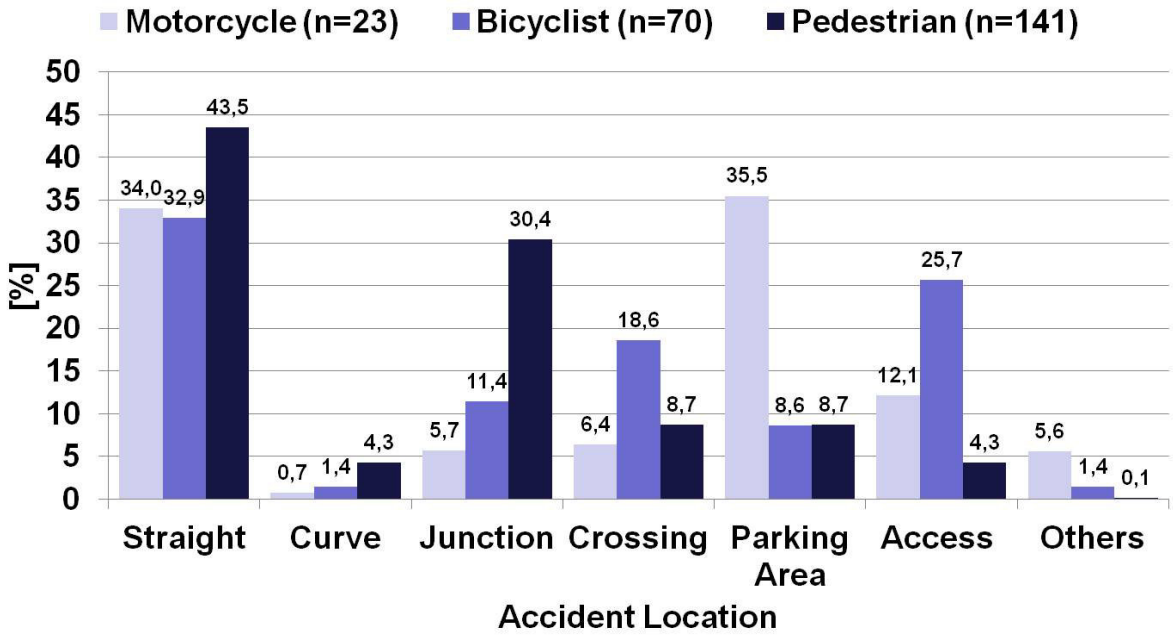

Figure 2: MAIS of different traffic participants in crashes with reversing cars.