

Shoulder Injuries in Single Bicycle Accidents

H. Stigson¹, M. Krafft², M. Rizzi³, A. Kullgren³

¹ Folksam Research and
Department of Clinical Neuroscience
Karolinska Institutet
Stockholm, Sweden
Folksam S23 106 60 Stockholm, Sweden
e-mail: helena.stigson@folksam.se

² Folksam Research and
Department of Surgical and Perioperative Science
Umeå University
Folksam S23 106 60 Stockholm, Sweden
e-mail: maria.krafft@folksam.se

³ Folksam Research and
Department of Applied Mechanics Vehicle Safety Division Chalmers University of Technology, Göteborg,
Sweden
Folksam S23 106 60 Stockholm, Sweden
e-mail: matteo.rizzi@folksam.se

ABSTRACT

Cyclist injuries leading to long-term consequences are common and therefore important to identify in order to design a more sustainable road transport system. Previous research show that of all impairing injuries, almost 70% were to the upper and lower extremities [1]. The most common injuries to the upper extremities were to the shoulder and the wrist (AIS 2).

The aim of this study was to investigate injury mechanisms regarding shoulder injuries in single bicycle accidents. In total 37 cyclists (8 females and 29 males) that sustained shoulder injuries and who seek medical care at Umeå University Hospital in the year 2013 were included. The injury data were obtained from hospital records. Each patient was interviewed by telephone including for example questions regarding the subject's cycling habits, use of bicycle helmet and details in the pre-crash and crash phases.

Most of the accidents (16/37) occurred on surfaces with low friction, such as ice or gravel. Approx 20% (7/37) reported braking prior to the accident. Approximately 40% (15/37) of the cyclists sustained fractures of the clavicle.

In 90% (33/37) the injury to the shoulder was result from a fall onto the shoulder or from a direct hit of the clavicle. Falling onto an outstretched hand only occurred in one case. 23 were falling to the side resulting in a straight hit on the shoulder and 7 hit the rear part of the shoulder, of which 5 were falling over the handlebar.

Traditional prevention of cyclist injuries has been focused on helmets. However, the findings of the present study indicate a need for other strategies to also prevent other injuries, especially to the upper extremities.

Keywords: bicycles, shoulder injury, long-term consequences, single bicycle crashes.

REFERENCES

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