

A. Du Chesne

Accidental injury: biomechanics and prevention, 2nd edn

Nahum AM, Melvin JW (eds) Springer, New York, 2002, ISBN 0-387-98820-3

Published online: 5 October 2004
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One of the classical functions of forensic medicine is the reconstruction of events leading to injury. The main question to be answered is how the injuries were caused and this is dependent on both internal and external influencing factors. Internal factors are controlled by the characteristics of biological tissue even if this is only within the broad framework of biological variability. During events leading to injury the tissues are subjected to pressure. The character, degree and direction of this pressure are the external factors affecting the mechanism leading to injury. Clinical traumatology is not really concerned with this question, where diagnosis and treatment are the main concerns. Forensic pathologists, who are mostly concerned with the biomechanical characteristics of tissues and their behaviour under stress, are therefore mostly frustrated by the available literature on trauma. The editors Nahum and Melvin, have tried to fill this gap with the second edition of "Accidental injury: biomechanics and prevention". In 22 chapters a total of 32 further authors from the USA present their opinions on general and specialised aspects of the biomechanics of injuries. As is customary, the dominant theme of the book revolves around traffic accidents. Generalised chapters are mostly concerned with the possibilities of biomechanical

research, such as crash tests, dummies (anthropomorphic test devices) and mathematical passenger models. The effect of occupant restraint systems and the current important problem area of the biomechanics of airbag inflation-induced injury, are of course discussed. Other chapters on the biomechanics of injury to special tissues and body regions, such as bones, soft tissues, bony skull, brain, cervical vertebrae, thorax, abdomen, thoracic and lumbar vertebrae as well as the pelvis and limbs, are also a treasure trove for forensic pathologists. The maximum stress limits, which are often very difficult to find, are presented here and discussed in detail. The book closes with a chapter on the biomechanics of injury and prevention in children and vehicle interaction with pedestrians. The biomechanics of injury as a scientific entity is in a state of flux. It is obvious that "Accidental Injury" of Nahum and Melvin cannot be used to answer all questions.

Astonishingly but praiseworthy is the fact that non-american references have also been cited in some of the chapters. This book deservedly belongs to the basic library of all forensic pathologists.

A. Du Chesne (✉)
Institute of Legal Medicine, University of Münster,
Roentgenstrasse 23,
48149 Münster, Germany
e-mail: duchesne@uni-muenster.de
Tel.: +49-251-8355153
Fax: +49-251-8355158