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Volume 3
Cerebral Contusions, Lacerations and Hematomas

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Foreword

Posttraumatic cerebral contusions, lacerations and hematomas in the past could often only be suspected by clinical symptomatology and be visualized by angiography in a restricted manner, but they are now diagnosed with precision through CT and MRI; they remain in the limelight in our daily management of severe head injuries.

Stålhammar’s longlasting research in biomechanics is here condensed in a concise review of the current knowledge in this field, thus providing the basis for our understanding of the parenchymal cerebral posttraumatic lesions.

The neuropathological investigations and findings remain fundamental to the clinical features, and in this text there is the advantage that they were carried out and interpreted by a very experienced neurosurgeon, Ion Oprescu, who most regretfully died before the completion of this volume.

The special morphological and clinical investigations by Nakamura, concerning diffuse brain injury, contribute to our necessary diagnosis and treatment of this phenomenon where, without gross visible lesions of cerebral tissue, a high mortality occurs.

The clinical features, the principles of therapy and the outcome are described by Vigouroux and Guillermain, whose clinical study clearly demonstrates the limitations of all our efforts in severe brain injuries, in spite of decades of clinical experience and research.

The analysis of the different combinations of brain swelling, edema, contusions and hematomas by Richard illustrates the interaction of these pathological lesions and their important time relationships, such as early brain swelling and the later appearance of brain edema, as well as the correlation with the age of the patients in respect to the outcome.

The clinical and radiological manifestations of intracerebral hematomas are examined by Foroglou, and various theories concerning their etiology are discussed, some of which are obviously based on too restricted numbers of patients. The nomenclature is colourful and it cannot be denied that even the authors of this volume do not use uniform terms.

Based on a particularly broad experience with posttraumatic hematomas, Glowacki presents the changes in the management of cerebellar
contusions and hematomas after the advent of modern imaging methods.

Frowein and coworkers underline again, from the clinical and radiological points of view, the important factor of time not only for the recognition of contusional lesions, but also for the reliability of diagnosis. From their study it becomes clear why the prognosis becomes more realistic no sooner than 24 hours after trauma. The optimum time of encountering a hematoma is within the first three hours; and of an enlarging contusion it is 8 to 12 hours following injury. Their analysis provides a comprehensive definition of the dynamics of posttraumatic contusions and of intracerebral hematomas.

The growing interest in multimodality evoked potentials in the posttraumatic period is shown in Firsching’s current review of the value of these special neurophysiological investigations.

The editors sincerely wish to thank all of the authors for their efforts and their valid contributions. They are particularly grateful to Phillip Harris for his irreplaceable and constructive advice as language editor. We also thank the publishers for their patient and continuous help to reach our common goal, to provide realistic basic data for the best possible care for our severely head injured patients.

And we wish to thank Mrs Lieselotte Jahn for her valuable secretary work.

ROBERT P. VIGOUROUX                 REINHOLD A. FROWEIN
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