

## Editorial

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# Quality of Life after Multiple Trauma

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Continuous improvements in the preclinical and clinical management of multiply injured patients with and without head injury in the last decade fortunately led to increased survival rates of up to 80% of the patients in western countries [1]. Although still improvable by further preventive and therapeutic strategies, not only the quantity but much more the quality of survival is of major importance as a clinically relevant outcome measure [2]. Yet research reports on the effectiveness of trauma care focus almost exclusively on classical, so called mechanical outcome parameters such as mortality, morbidity, organ dysfunction, or physical function rather than on the quality of the patients' survival. Comprehensive outcome assessment is a concept not just a term with mechanical definitions. It is characterized by attributes, associations, and clusters on several levels of epistemology and is intrinsically related to the concept of health and disease [3]. To describe the personal burden of illness of the patient with multiple trauma, psychosocial factors such as pain, apprehension, depressed mood, restricted mobility and other functional impairments and diminished cognition must be considered. These problems are more frequent than expected, especially in patients with combined head injuries, and can persist for a long time after the accident. In multiple trauma 34–63% of the patients did not return to work 1–6 years after trauma. The incidence of post-traumatic stress disorder (PTSD) is reported to be > 10% (1–46%) within the first year after

trauma. Moreover, driving problems (38–60%), anxiety (8–42%), depression (8–45%), and psychosocial problems (60–78%) are serious problems which need to be integrated in the assessment of consequences of trauma and treatment [4–7].

Today, there is unanimous agreement that quality of life (QoL) is a multidimensional construct comprising physical, psychological, social, and functional domains [8]. In patients with traumatic brain injury a fifth domain, cognition, has to be included which covers the neuropsychological impairment [9]. Medical professionals, however, either doubt the reliability of QoL measures or are still unaware of the topic because progress in the recent years mainly came from social scientists, medical psychologists and epidemiologists. Surgeons who tried to use QoL measures have found the current techniques to be neither relevant nor useful in their daily practice. Brevity, ease of administration and scoring, and simplicity of interpretation are mandatory if the instruments are to be used in clinical practice and at follow up. Obviously, there is a gap between the developed instruments on the one side and the needs of physicians active in trauma care and rehabilitation on the other side. Beside further refinement of functional outcome measures we see a strong need to introduce practical QoL measures as a tool in order to:

- a) re-assess the prognostic value of injury severity measures (potential for rehabilitation)
- b) accurately describe changes over time (post-traumatic recovery and rehabilitation)
- c) have a basis for judging the effectiveness of therapeutic intervention (e.g. drugs, physical and psychological therapy) in clinical trials
- d) determine the cost-effectiveness of specific interventions.

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Fig. 1. Participants of the first consensus conference about “Quality of Life after Multiple Trauma”.

Based on our previous successful experience with the consensus conference on QoL assessment in surgery about 10 years ago [8] and our scientific work in the field of trauma and rehabilitation, we organized an interdisciplinary conference on “Quality of Life after Multiple Trauma” to help improving the situation in this most important area. It was the aim of the conference to develop an internationally accepted evidence-based guideline for the systematic evaluation and application of QoL measures in trauma patients. Four groups of patients were considered: children and adolescents with traumatic brain injury, adults with traumatic brain injury, adults with multiple injuries but without brain injury, and adults with spinal cord injury.

Selected experts from different disciplines from all over the world (Fig. 1) were invited to discuss five previously formulated and consented questions within their groups and in the plenum. The consensus results of each group and a conference recommendation are presented in this issue of *Restorative Neurology and Neuroscience* in addition to two overview articles. The conference was organized in the name of the German Ministry of Education and Research (Bundesministerium für Bildung und Forschung; bmb+f) whose generous sponsoring is gratefully acknowledged. Numerous, european and international societies as well as the WHO supported this conference. Now, the help of the societies is needed to further promote the issue of QoL in multiple injury and to introduce the results into practice.

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