Towards the practical application of recent advances

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'For those interested in the advances in this branch of medical science, and especially those about to enter this field of study, there could be no better starting-off ground than the present volume, in which the articles are written by experts and by those who have contributed substantially to the discoveries described.'

The words of Sir Edward Mellanby in his Introduction to the first British Medical Bulletin devoted to injury. It was published only 9 years after the end of the Second World War when many assumed that the burden of trauma on the health service would decrease during peace-time. Leading experts wrote eloquently about wound shock, blood transfusion and metabolic aspects of injury. Their priority was to understand basic mechanisms in order to provide more effective therapies. There was a sense of optimism – 'it is indeed an indication of one of the triumphs of modern medicine, namely, the success of combating wound infection, that so little space is given to this subject in the present volume'.

In the 1985 British Medical Bulletin issue on Trauma and its Metabolic Problems, Professor Berry Stoner wrote of the failure to defeat sepsis and the increasing interest in neuroendocrine responses to trauma, quoting Mellanby’s call for 'the acquisition of more knowledge of the biochemical changes which are interposed between the time of injury and the development of shock'.

Earlier this year, a British Medical Bulletin issue on Intensive Care Medicine emphasised the increasing clinical importance of the care of critically ill patients. The authors describe a certain tension between, on the one hand, the demonstration of improved methods of clinical measurement and imaging and a better understanding of underlying biological mechanisms and, on the other hand, the failure to deliver effective and comprehensive care to the widening spectrum of critically ill patients. The cost of treatment escalates and the research agenda designed to provide the evidence-base becomes ever broader. Despite these evident frustrations the Intensive Care Medicine issue brings together contributions on a wide range of topics of relevance to those interested in trauma — covering sepsis, GI tract integrity, cerebral protection and, of course, 'the oxygen trail'.

This issue on Trauma takes a different, hopefully complementary, perspective. Its genesis is prompted by a recognition that there is a persisting
burden of mortality and morbidity after trauma despite the emergence of improved diagnostic and therapeutic tools.

The assumption that the incidence of trauma would decline has not been realised. Instead of a World War we seem to have a world of wars. Traffic-related injuries have fallen in the West but are increasing rapidly in developing countries. Everywhere they kill young people. In Europe, it has been estimated that a road traffic fatality represents 40 years of lost life compared to 10.5 for cancer and 9.7 for cardiovascular disease. Inter-personal violence is declining in some parts of the world but generally is on the rise. The size of this epidemic has been brought into focus by the Harvard School of Public Health working with the World Bank and the World Health Organization. In 1990, ‘loss of disability adjusted life years’ due to road trauma ranked ninth in the world league table of causes of death. In 2020 it is estimated to be in third place. Perhaps for this reason trauma is moving up the political agenda. ‘Accidental injury’ is, for example, one of only four themes in the UK Government’s latest strategy document Our Healthier Nation.

Linked to this awareness of the prevalence of injury is the realisation that much of it could be avoided or its effects ameliorated. Why should we accept an 8-fold variation in traffic related fatality rates across Europe? The association between deprivation, chronic ill health and trauma incidence suggests that preventive strategies must embrace the wider social context of the at-risk population as well as environmental and behavioural issues in the community and clinical competence within the health service. Additionally, the importance of rehabilitation in optimising outcome has only recently received serious attention. For all these reasons, this issue devotes one-third of its chapters to these wider aspects of trauma care in recognition of their importance in the development of a comprehensive, science-based strategy.

The remaining chapters address those aspects of management where scientific advances have provided an opportunity to improve specific clinical practice. They are concerned chiefly with the initial assessment and treatment of the multiply injured patient, the subsequent care of individual injuries, particularly to the brain, abdomen and limbs and the management of burns. The reader is referred to the British Medical Bulletin issue on Intensive Care Medicine for a discussion of recent developments in those aspects of trauma care which are usually managed in an intensive care unit.

The emphasis in this issue is on practical topics which will be of direct relevance to clinicians (including intensivists) who want an authoritative guide to the new evidence-base of trauma care. The contributors are all experts in their own fields and I have no doubt that Sir Edward Mellanby’s words are as apposite to them today as they were to the eminent contributors to the first British Medical Bulletin on trauma published 45 years ago.