

Lipid Mediators in the Immunology of Shock

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Lipid Mediators in the Immunology of Shock

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PREFACE

This book contains the proceedings of the ARW NATO conference on Lipid Mediators in Immunology of Burn and Sepsis held in Helsingor, Denmark, July 20-25, 1986.

This meeting brought together some of the most distinguished researchers in the fields of thermal injury, the immune system and lipid mediator biochemistry. It is well known that there is a substantial impairment of the immune response during sepsis, burn, trauma and other kinds of shock. These conditions are characterized by a massive inflammatory process which occurs during the early phase following injury. Among the various mediators released at this time are leukotrienes, thromboxane, histamine and platelet-activating factor. This latter autocoid possesses potent proinflammatory properties and together with the other mediators may account for some of the post-injury pathophysiological phenomena such as extravasation, hypotension, chemotaxis... It is of great interest to note that recently leukotrienes and platelet-activating factor have been shown to be potent mediators of the immune response. Thus, the purpose of this meeting was to bring together clinicians, immunologists and biochemists in order to examine and hopefully clarify the putative role of various lipid mediators prominent in the early stages after injury. This book is divided into the following six sections.

Section 1 provides a general overview of the physiological consequences of burn, sepsis and shock. The profound clinical and biological alterations induced by these conditions are considered. Section 2 examines the different mediators produced in response to the above pathologies with particular attention being focussed on the pharmacology of lipid mediators. The impairment of the immune response in critically ill patients is described in Section 3, while the specific mechanisms responsible for the depressed immune activity are considered in Section 4. This section includes discussions on altera-

tions in activity of T cells, NK cells and various cytokines after shock or during other injuries such as acute myocardial infraction. Section 5 is devoted to the relationship between lipid mediators and the immune response. Accumulating evidence which suggests that platelet-activating factor and leukotrienes are important modulators of the defence system is reviewed here. Finally, in Section 6 there is a brief consideration of several new drugs which may prove to be valuable therapeutic agents in trauma, shock and related conditions.

In conclusion, the excellent contributions to this volume highlight the complex nature of this new and rapidly developing field of research. Although we are only just beginning to gain insight into the immune consequences of shock and trauma, an integrated approach to the problem such as that promoted at the NATO ARW documented here, may eventually provide (i) a better understanding of the pathophysiological events involved in thermal injury and (ii) a rationale for the development of new drugs in the treatment of shock, burn and sepsis.

The Editors

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