



Clinical immunotoxicology

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EDITORIAL

CLINICAL IMMUNOTOXICOLOGY

Immunotoxicology is defined as "the discipline concerned with the study of the events that can lead to undesired effects as a result of interaction of xenobiotics with the immune system" (1). Therefore, human consequences involving either a direct effect of toxic compounds on the immune system (immune depression, for instance) or an immunologically mediated response to these compounds (auto-immunity and hypersensitivity, for instance), should be considered for study.

In the recent past, investigators have mainly focused their attention on the potential consequences of immune depression, e.g. impaired resistance toward infectious diseases or increased incidence of certain types of neoplasia. However, side-effects of immuno-enhancing agents and biological response modifiers are emerging, whereas drug-induced allergic and auto-immune reactions are being commonly reported.

Immunotoxicology, a rapidly expanding new discipline at the intersection between immunology and toxicology, has so far been more concerned with experimental work conducted in vitro or in animals rather than with clinical studies. Indeed, there is a pressing need for studies looking for correlations between animal and human data regarding immunotoxicities. For instance, a large amount of data is currently

available on the immune effects of heavy metal exposure in mice (2), whereas immune alterations, if any, of workers occupationally exposed to heavy metals are completely unknown.

This issue of the Journal of Toxicology-Clinical Toxicology contains two general reviews dealing with clinically relevant aspects of Immunotoxicology. It is hoped this will be an opportunity for clinical toxicologists to become aware of their role in the field of immunotoxicology. Indeed, immunotoxicology should certainly not be restricted to an experimental discipline of toxicology as much is likely to be learned from clinical situations, e.g. acute poisonings, post-marketing drug surveillance or occupational exposure.

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