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Is a Synergistic "Cross-Talk" Among Microbial and Host-Derived Agonists the Main Cause of Tissue and Organ Injury in Post-Infectious and Inflammatory Sequelae? : Facts, Paradoxes, and Myths (a View Point)

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EXPERIMENTAL MODELS OF INFLAMMATION AND INFECTION TEND TO INVESTIGATE THE PATHOGENETIC ROLE PLAYED BY ONE SINGLE PRO INFLAMMATORY AGONIST AT A TIME

Although there have been unprecedented advances in research in the last decades on host -and-parasite interrelationships, it is enigmatic why despite the "obvious" consensus that tissue damage in inflammatory and infectious conditions is multifactorial and paradoxically perhaps, involves a "cross – talks" among a multiplicity of pro-inflammatory agents generated by microorganisms and by the hosts own protective systems, the large majority of investigations have adopted a convenient *reductionism* approach to this complex problem by examining the potential pathogenetic properties of one single "omnipotent "pro inflammatory agonist, at a time (**1,2**).

Screening the comprehensive and updated reviews recently published on this subject either in journals or in chapters in text books of pathology and microbiology, revealed that there is a tendency to summarize the mechanisms of tissue damage in inflammatory and infectious processes by oversimplified and unrealistic cartoons.

These usually depict phagocytes (neutrophil, macrophages, eosinophil) sometimes adhering to a target cell, via adhesiens molecules, and showing the engulfment either of opsonized bacteria or of immune complexes. The activation of NADPH-oxidase which accompanies phagocytosis is shown to yield reactive oxygen species (usually H_2O_2) which in the presence of myeloperoxidase (MPO) yields HOCl capable of inactivating proteinase inhibitors to facilitate the action of the highly cationic elastase released from leukocyte granules. Most of the reviews I have read stressed that oxidants and proteases

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