Shotha and the unified theory of inflammatory diseases

Shotha is a term that was used in Charaka Samhita (1000-400 BCE) to explain the inflammatory immune response to either internal causes within the body due to endogenous factors or external causes such as infection and injury due to exogenous factors. Resolution of shotha or inflammation critically contributes to the maintenance of human health by overcoming adverse conditions presented throughout life including communicable and non-communicable diseases. Blood cells (among them mononuclear phagocytes, T cells, B cells, natural killer cells and mast cells), all thought to originate from circulating hematopoietic and immune precursors and key resident cells of the tissues orchestrate aspects of the acute and chronic shotha that underlie diseases of many organs. Inflammatory diseases are accompanied by a coordinated series of common mechanisms that is initiated by expression of cytokines, growth factors, mitogens and morphogens leading to a disturbance in homeostatic balance causing oxidative stress, tissue injury, extracellular matrix remodeling, angiogenesis and fibrosis in diverse target tissues. Careful resolution of shotha formed one of the central themes in treating pathological conditions through drugs, diet or lifestyle modifications in Ayurvedic System of Medicine which emphasized precautions not to overwhelm and aggravate the immune system more than what is needed. Our recent studies on the regulation of macrophage-mediated inflammation by food substances and Ayurvedic rasayanas strongly suggest the involvement of pro and anti-inflammatory macrophages in maintaining homeostatic balance. Results of these studies strongly favor the conclusion that shotha or inflammation may contribute to a number of degenerative conditions in modern humans.

Biography
Rajavashisth Tripathi is an internationally renowned Scientist with Professor of Medicine appointments at the David Geffen School of Medicine at UCLA and at the Charles R. Drew University of Medicine and Science in Los Angeles. His research work is focused on molecular mechanisms underlying the pathogenesis of modern diseases strongly linked to inflammation. He has extensive experience as Director of research laboratories and related administration by implementing research programs funded by National Institute of Health, American Heart Association, Eisner Foundation, Phillip Morris External Research Program and the Department of Biotechnology, Government of India. Currently, he has taken a Visiting Professorship at the Banaras Hindu University in India to study molecular and Ayurvedic biology of inflammation.

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