

Describe the mechanism of the acute inflammatory response to tissue injury.

Subsequent questions explored knowledge of what cytokines are, and what major roles they play in the body, the complement system, apoptosis, immune basis of rejection of allogeneic organs, and serotonin.

**“Describe the acute inflammatory response to tissue injury”**

inflammatory response to tissue injury is initiated by  
 by complement, CRP, and other acute phase proteins, histamine, kinins or bacterial cell wall products such as endotoxin and exotoxin.  
 the inflammatory response is mediated by  
 cytokines produced by macrophages and other cells of the innate immune system  
 these cytokines include TNF alpha and beta, and IL-1 and 6.  
 the inflammatory response is characterized by the following symptoms  
 redness, heat, swelling, pain, and possible dysfunction of the organs or tissues involved

**“Please define the term cytokine”**

mediators of immune and inflammatory responses  
 in the innate system they are produced mainly by macrophages and NK cells  
 in the adaptive immune system they are produced mainly by T-Lymphocytes

**“What is the complement system”**

is a system of heat labile proteins which act together to generate important effectors of immune response  
 there are three major pathways, the classical, the alternative and the lectin  
 there is ultimately a cascade of responses in each pathway which leads to the opsonisation of cells

**“What is apoptosis”**

programmed cell death

**“Please describe the immune basis of rejection of allogeneic grafts”**

this immune system is characterised by  
 recognition  
 effector responses  
 memory

