

Summary

The essay claims that the relationship between anaesthesia and immune response must be taken into consideration. As a knowledge of immunology is now essential for all anaesthetists and of particular importance in intensive care; hence, the essay aims at studying :

1. Basic immunology, 2. Hypersensitivity, and 3. Transplantations,
4. Autoimmune diseases, 5. the effect of anaesthesia and surgery on immune response.

Chapter one, entitled " basic immunology ", handles 1. immunology as a broad field encompassing basic research and clinical application, and 2. cytokines as a heterogeneous group of proteins, variously termed lymphokines, monokines, interleukines and interferons, which act on cell surface receptors to regulate and modify cell growth, maturation and repair.

Chapter two, entitled (Hypersensitivity), denotes of exaggeration in an immune response, hypersensitivity reactions are divided into four types depending on the mechanism of immune recognition and on the inflammatory mediator system.

Chapter three, entitled (Transplantation) deals with the replacement of diseased organs (kidney, liver, bone marrow) by healthy one from another individual. Also, it handles rejection of the transplanted organ and immunosuppressant drugs.

Chapter four, entitled (Autoimmune disease) discusses autoimmune diseases (Hashimoto thyroiditis, Myasthenia Gravis and Insulin dependent diabetes mellitus) and immunodeficiency diseases.

Chapter five, entitled (The effect of anaesthesia and surgery on immune response), studies the alterations that have been found in every component of immune response during anaesthesia and surgery. It also studies the effect of blood transfusion, pain, parenteral intravenous fluid, malnutrition and immunomodulation of cytokines during anaesthesia and surgery.

The management of anaesthesia is more important than selection of some special anaesthetic agent or method. Good management means good anaesthetic care and maintenance of haemostasis. The body is able to correct even severe alterations in the immune response if the vital function is maintained and the underlying disease can be treated.

A knowledge of immunology is now essential for all anaesthetists and a particular importance in intensive care. The immunology consequences of present practices need re-examination and both scientific and clinical studies should be undertaken with the introduction of any new drugs and techniques to determine the consequences of their application on the immune system.
