Lymphology 21 (1988) 81

As part of this Symposium, the following additional hypotheses were considered:

LYMPHATIC-IMMUNE SYSTEM INVOLVEMENT IN AIDS AND AIDS-RELATED COMPLEX (ARC)

M.S. Gottlieb
Santa Monica, California, USA

AIDS is an infection of the immune system and brain with a human retrovirus that induces profound immune dysregulation, the most obvious manifestation of which relates to immune deficiency, namely opportunistic infection. More subtle manifestations include dysregulation of lymphokine and cytokine production with effects on immunocytes, neural cells, and vascular and lymphatic endothelium.

LYMPHATIC TERRAIN OF AIDS-KAPOSI'S SARCOMA (KS)

W. Olszewski
Polish Academy of Science/Medical Research Center, Warsaw, POLAND

The lymphatic system, which serves the whole living organism in the process of homeostasis, maintains a physiological environment including the fluid and ground substance surrounding the cell as well as the neighboring cells with their genetically defined self, 1) Assuring a favorable composition of mobile intercellular fluid and ground substance for the integrity and function of tissue cells; 2) transporting away and processing chemical products released from cells, as well as their subcellular shedded structures, e.g., membrane receptors; 3) eliminating dying or mutant cells; 4) removing non-self organic (e.g., bacteria, viruses) and inorganic (e.g., carbon, silica) particles entering the intercellular space from the environment.

This is the lymphatic terrain which becomes disordered during the course of AIDS-KS. Not only *in vitro* but *in vivo* evidence should be sought of this overall lymphologic dysfunction where possible by non-invasive techniques. 1) Studies are needed on the manner of maintenance of an appropriate chemical and physical environment for cells in the non-lymphoid tissues with special emphasis on the regulatory signals from these cells; 2) functioning of immune cells migrating through non-lymphoid tissues; 3) cooperation of immune cells at various regulator levels *in vivo* (lymph nodes, spleen, bone marrow, etc.); 4) integration of regulatory processes of the lymphatic, nervous, and endocrine systems.

LYMPH-LYMPHATICS-LYMPH GLANDS-LYMPHOCYTES-LYMPHOKINES IN HEALTH AND IN AIDS

J.W. Shields
Santa Barbara Medical Foundation Clinic, California, USA

Lymph, lymphatics, and lymph glands develop in proportion to the rates oxygen and food are consumed by vertebrates to create the cytosols characteristic of age and species. The lymph glands develop along the course of periarterial lymphatics to filter lymph emanating from all regional respiring cells. Lymph glands specialize to selectively process and add lymph rich in lymphocytes, normal globulins, immunoglobulins, and lymphokines essential to normal growth of the animal, repair of the constitution, and lysis of cells or organisms which are obnoxious or genetically incompatible. Failure in each of these parameters ensues with impairment of lymphocyte growth in lymph glands, especially as seen in thymic aplasia; excessive irradiation or immunosuppressive drug therapy; and in lymphocytopathic retroviral infections (such as AIDS) which primarily victimize large proliferating lymphocytes and customarily employ small migrant lymphocytes as vectors for retro- or provirus transmission via semen, blood and maternal milk. In AIDS, lymphocytopathic retroviruses are prone to disrupt all these homeostatic functions and to use migrant lymphocytes as vectors for spreading infection.