Notice

The Importance of the Lymphatic System

It is perhaps rather unusual for an international society to feel that it is essential to draw attention to the very existence of its subject matter. However, such is the general lack of knowledge about the lymphatic system that the International Society for Lymphology believes that the following well-established points need reiterating:

(1) All regions of the body are drained by the lymphatic system. Often the initial (terminal, capillary) lymphatics are joined to the most remote parts of the interstitium by tissue channels only a few tens of microns long, just as are the blood exchange vessels. In a few regions these channels form systems many centimeters long, but still drain into true initial lymphatics eventually. In the cases of the brain and retina they do this outside the skull. Except in oedema or in encapsulated organs, fluid will normally only enter the initial lymphatics if there are variations in tissue pressure – caused by movements, contractions of adjacent muscles, etc. These also help propel the lymph in the large lymphatics, but intrinsic contractions in their walls also cause it to flow.

(2) The lymphatic system removes a small proportion of the smaller molecules from the tissues. Although this is often quantitatively small, it is still of considerable importance in helping to prevent oedema. Some of the smaller macromolecules also pass to the blood, but usually most of them (and certainly all the larger ones, particles, etc.) are removed by the lymphatic system – except for some removal by tissue proteolysis.

(3) The presence of any oedema implies that the lymphatics (as well as the other mechanisms which act to prevent oedema) have been overloaded. This may be because of an excessive lymphatic load with a normal system, or because of a normal load with a deficient system, or both.

(4) If all the lymphatics draining a large region (e.g. a limb) are simultaneously completely obstructed, the animal dies within 1–3 weeks from loss of protein via lympho-cutaneous fistulae. This does not happen in man because such abrupt and complete lymphostasis does not occur.

(5) The neglect of lymphatic transport can cause considerable errors in physiological experiments on the blood microcirculation.

(6) In clinical practice, while oedemas near the surface are often observed, many of those of deeper organs are not.

(7) Oedematous tissues have poor oxygenation, considerably reduced functional capacities, and heal slowly. A chronic high-protein oedema is one cause of chronic inflammation and fibrosis.

(8) Any interference with lymphatic transport can provoke a lymphoedema – especially if the system is deficient or overloaded. This may be as insignificant as an insect-bite. Iatrogenic damage includes: the removal of lymph nodes, lymphangiography (with media which damage lymphatic walls), excessive radiation, inappropriate surgical procedures damaging lymphatic trunks, which often lie adjacent to the large blood vessels. Sometimes special considerations make it essential to perform such procedures, but it must be realised that they may provoke lymphoedema.

(9) Lymphoedema can now be prevented or treated, and sometimes completely cured, by a number of methods. It is no longer ethical to neglect it. As in all high-protein oedemas, diuretics are contra-indicated except in emergencies, or for co-existing diseases.

(10) The objects of the International Society for Lymphology are to promote knowledge about the lymphatic system: its structure and function, its investigation in patients, the treatment of its deficiencies and its roles in immunology and neoplasia, etc. Information about this body, and a list of books and reviews on the lymphatic system may be obtained from:

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