BOOK REVIEW

Actualités de physiologie pathologique. La biologie de l'inflammation. (Current Topics in Pathological Physiology—The Biology of Inflammation). Edited by J.-L. PARROT (1966). Pp. 196, 45 figs. Masson, Paris.

This review of aspects of the pathology of inflammation consists of eleven papers by international experts and is of considerable interest to those concerned with the treatment and nature of the rheumatic processes. First is a review of the evidence for the participation of histamine in the primary inflammatory response. It has been impossible to duplicate the many features of inflammation purely by local injection of histamine, but studies based on histamine-releasing agents, anti-histaminic compounds, and compounds which can deplete the skin of histamine, all show that histamine does take some part in the inflammatory reaction (Parrot, Ruff, and Saindelle). Boissier guides us through the thickets of the permutations and combinations of the many different anti-inflammatory drugs, inflammatory stimuli, and animals in which these are tested. The remarkable species variation is again brought out. Rocha e Silva explains the action of bradykinin antagonists and other kinin antagonists (some work by inhibiting precursors, others destroy the kinins after production). In his view, we are still a long way from having a specific anti-bradykinin; the compounds currently available all have anti-histaminic or anti-serotonin activity to a greater or lesser extent. Perhaps the biggest gap in our anti-inflammatory armamentarium is the lack of a powerful pure antiserotonin compound. E. Kelemen and his wife describe elegant experiments based on the analysis of radio-iodine-labelled albumin in inflammatory exudates. Their findings are only explicable on the theory that a capillary has an all-or-none reaction to the inflammatory event. There is no such thing as a progressive increase of permeability

for each individual capillary. If a capillary loses fluid, it does so with the maximum concentration of albumin; only the *number* of capillaries in this state of permeability varies. Delbarre and his colleagues review the application of experimental models of inflammation and, in particular, experimental models of arthritis, to the human problem of rheumatoid arthritis in a useful chapter, somewhat given to generalization. Ungar has interesting things to say about the chemical and physical mediators of pain and inflammation, mentioning his own work in which the hind paw of a rabbit is used as the test object and the degree of pain is estimated directly by the sensory discharges in the saphenous nerve. Delaunay and Bazin take us further into the phase where cellular infiltration and the liberation of tissue-destructive enzymes occur. But perhaps the biggest bonus in this book is Selye's chapter on his own work, briefly summarizing and reviewing 20 years' studies based on ingenious experimental models of inflammation and disordered repair processes. Here you will find, recorded and illustrated, experimental arthritis exaggerated by mineral-corticoids, "anaphalactoid inflammation", periarteritis nodosa caused by the endocrine kidney, ulcers of the stomach caused by stress, digital necrosis brought on by intravenous adrenalin in animals sensitized with metal salts, and, most fascinating of all, pictures of local and generalized *calciphylaxis*. Calciphylaxis is Selye's name for the phenomena induced in the rat by tissue-localizing agents in animals already sensitized by otherwise non-toxic doses of calciferol. Some experimental analogues of human diseases can be produced by appropriate manipulation, including dermatomyositis and scleroderma. The picture of a white rat covered with a new skin and stepping out of its old calcified integument like a moulting crustacean takes a lot of explaining in terms of conventional pathology.

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