

### Ageing and Degenerative Diseases

Are you growing old and fat, and reading the papers telling of your good friend passing on? While you're reflecting on whether you may be next, why not read this good book on our accumulating knowledge and widespread ignorance of ageing? Thirteen authors contributed their clinical or experimental experience at a symposium on the processes of ageing and diseases of older persons in St. Louis, March 24, 25, 1944.

W. C. Hueper wrote a carefully organized summary of the last fifty years' contributions to the relationships of physical and chemical agents of endogenous and exogenous origin to the histopathological changes of the large and small blood vessels, with interesting side remarks on their regional anatomical localization. Two tables give full data on the etiological factors and the anatomical types of spontaneous and experimental arteriosclerosis. Well documented by American and foreign literature the anoxemic causative mechanisms are considered equally in small animal and human observations, with frequent references to clinical diseases and with implications of their import to future clinical research, prophylaxis and treatment.

Irving H. Page presented a very readable series of questions and answers on arteriosclerosis and lipid metabolism, terminating in the final query—How can the known factors which predispose to atherosclerosis be controlled? Stimulating to the clinician and inquisitor alike is the conclusion: "First prevention of hyperlipemia, second, prevention of the mechanical strain, and third, prevention of that state of the tissues in the arterial walls which increases the receptivity to plasma lipids or prevention of that state of the blood which leads to abnormal precipitability of its lipids."

William B. Kountz outlined the early trial and error methods in the St. Louis City Infirmary resulting in the conclusion that clinical study of degeneration must focus on the functional ability of the body. His coworkers gave two clinical investigations. One was a study of 212 aged patients to relate age, sex, basal metabolic rate, cardiac decompensation and coronary and peripheral sclerosis to blood cholesterol levels, with the conclusion that there was no relation of blood cholesterol to the degree of atherosclerosis. The other study concluded that with increasing age, there is a gradual lowering of glucose tolerance but not to a degree that could be considered diabetic.

The Pediatrics department presented a case of progeria (premature senility).

Lester R. Dragstedt reported observations suggesting that the factors responsible for the primary deposition of lipids in the intima may be similar to those producing such deposits in the liver. As Lipocaic fat-free alcohol extract of the pancreas prevents the deposition of fat in the liver.

Edward J. Stieglitz emphasized the factors obstructing diagnosis (tentative opinions): (1) difficulties inherent in the disease, (2) difficulties inherent in the patient, (3) inadequacy of clinical methods, and (4) complexities of diagnoses per se.

Wm. J. Kerr offered a challenge to the adequate therapeutic management now available in obesity, postural defects, pulmonary emphysema and circulatory failure. Wm. MacNider predicted that the research of the future would be increasingly of a biochemical and biophysical order.

John A. Saxton, Jr., reported the experiments of McCay et al. indicating that the life span of rats can be extended 50 per cent by drastic reduction of caloric intake from early life. Also, the incidence of tumors, nephrosis, chronic pneumonia, middle ear disease and gastrointestinal lesions are less. Implications in man are suggested.

Leo Loeb, discussing cancer and the processes of ageing, concluded the necessity of an accumulation of stimuli of a certain kind and range of intensity, acting over a continuous length of time on a given tissue, which has been sensitized by genetic factors specific for each tissue, organ, individual and species. Observations on Mammary carcinoma of mice illustrated the genetic principles.

A final round table discussion made one realize the flux and infancy of our knowledge of ageing, a growing problem of our century.—*Grant O. Graves, M. D.*

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