Meetings

Allergies: Ecological Approach

The first annual meeting of the Society for Clinical Ecology was held in Chicago on 24 April 1966. The meeting was scheduled just prior to the annual meeting of the American College of Allergists because of the increasing interest of allergists in the broader scope given to their practices by the ecological approach. Interest in the field of clinical ecology has been expanding since Theron G. Randolph began calling attention to a broader spectrum of responses in patients seen during his treatments of allergy. Most significant observations have concerned the frequency with which patients showed mental aberrations, such as mental depression, schizophrenic-like reactions and other behavioral disturbances, in addition to more classical allergic symptoms such as asthma, hives, and headache. Observations of particular interest concern the tendency of such reactions to be caused by a variety of chemical exposures such as pesticide residues, volatile, and dissolved emanations from plastic material, airborne residues from gas kitchen and heating units, and fumes from auto exhausts and industrial operations.

Presentations covered various aspects of clinical ecology such as environmental engineering, objective measurements of clinical reactions, eosinophilic cellular changes caused by food allergy, and the experimental reproduction of clinical syndromes in the animal laboratory.

After confirming Randolph's observations in her own practice, Eloise W. Kailin (Washington, D.C.) secured the cooperation of Clifton Brooks (president of the organization) to establish by the double blind method that systemic reactions in susceptible individuals occurred to liquid foods stored in soft plastic containers. With the help of Lois Platt, Kailin found that women afflicted with the chemical reaction syndrome showed a diminished number of sex chromatin cells in buccal and vaginal smears. The sex chromatin count increased toward that of normal women as symptoms were brought under control by proper management of diet and environment.

Alicia Hastings, using the electromyograph, collaborated with Kailin. She showed that patients complaining of fatigue as a symptom of the chemical reaction syndrome developed electromyographic evidence of cerebral suppression of muscle when a solution of DDT, diluted from 10 to 1000 parts per million, was held under the nose and inhaled for 5 to 8 minutes.

Investigating these phenomena further in the laboratory, Alsoph H. Corwin (Johns Hopkins University) reported results of his experiments on allergies induced by food and inhalants in guinea pigs. Corwin pointed out that von Pirquet originally defined allergy as an altered reactivity without implying that it was necessarily immunological. In line with von Pirquet's definition, possibilities such as enzyme deficiencies or inherited or acquired metabolic defects (which modern methods may reveal to be associated with altered reactivity) can be blanketed together under the term allergy. For experimental purposes, it is required that the altered reactivity should be consistently reproducible and should be susceptible to measurement. Accordingly, Corwin chose guinea pigs as the animal and the pulse rate as the physiological indicator. His experiments presented a series of technical challenges. Allowances had to be made for the individual reactivity of guinea pigs. All animals would develop some kind of spontaneous, allergic reaction which would remain consistent for that animal, but in each case the particular food or inhalant causing the allergy was not predictible. Instruments had to be developed which would allow recording of the heart rate without disturbing the animal. Also, in order to study inhalant allergies, flowmeters were devised to measure dosage of impurities introduced into the air. By trial and error, conditions were found which would consistently produce the lowest control pulse rate. Then various foods and inhalants were found to act as accelerators or decelerators on the pulse rate. The dosimeter was also applied to the study of reactions to inhalants in human beings and revealed that 20 percent of the student population reacted to ethyl acetate, a substance to which people are exposed regularly in vinegar and alcoholic beverages.

The concepts presented at this meeting offered a hopeful outlook to clinicians in caring for "problem" patients often labeled "psychosomatic." Such patients have not been adequately studied in respect to their individual reaction to foods and inhalants of their environment. Information gained from clinical observations on these patients is needed by architects, environmental engineers, and dietitians to plan dwellings, factories, and a regimen of living which will reduce exposures to substances most often found responsible for reactions. With adequate study of these patients, one can observe not only the reversibility of symptoms, but various stages of adaptation. If the reaction is not brought under control, the breakdown of adaptation could produce acute or chronic illness.

MARSEILLE SPETZ
Human Ecology Research Foundation, 720 North Michigan Avenue, Chicago, Illinois 60611

Shock Metamorphism of Natural Materials

As recently as 60 years ago, it was generally considered unlikely that the impact of meteorites on the surface of the earth could produce any large or lasting effects. Proponents of the theory that the 4000-foot-diameter crater east of Flagstaff, Arizona, had resulted from such an impact were often regarded with the inattention and amused tolerance currently given to flying saucer fanatics. In the relatively