Further Section

International Archives of Allergy 1951;2:387-390

Book Reviews – Livres nouveaux – Buchbesprechungen

Dr. T. E. Gumpert: The Infective Factor in Asthma.
Infection in the lung, unless it is associated with chronic bronchitis, plays a subsidiary role in thegenesis of asthma. Similarly, infection in the upper respiratory tract, unless it is an integral partof broncho-sinus disease, is contributory rather than causative as far as asthma is concerned.
Surgical measures should be taken solely on the merits of the upper respiratory infection, butuntil some simple method of restoring the bronchial mucous membrane to normal is devised andata technique is discovered of ridding it of its excessive secretions, bronchitic asthma is likely toremain a challenge to all of us.

Mr. Clement Francis: Tonsillar and Sinus Sepsis in Asthma.
Mr. Francis began his talk by referring to the frequency of occurrence and the effect of treatmentof sepsis in tonsils and sinuses. Tonsillar size was no indication of infection and if operation wasdecided upon, asthma was no contraindication for general anaesthesia. Allergic and suppurative sinusitis had to be differentiated. The radiological appearance of mucosal thickening in a sinusmight be a very temporary finding and even when pus was present, conservative surgery, in thespeaker’s opinion, gave better results than more radical measures. The aspirin sensitive patientwith nasal polypi was a particularly difficult problem to deal with. Again radical surgery of thesinus made some cases much worse and as in other allergic conditions of the naso-pharynx,might herald the onset of asthma. Finally mention was made of septic foci in allergic conditionsother than asthma.

The first Clinical ACTH-Conference was held in Chicago under auspices of the ArmourLaboratories on October 21st and 22nd, 1949. During 1950 the interest in research and clinicalwork in this field, promoted and sponsored by the Armour Laboratories, increased considerably.
The availability of ACTH increased markedly during 1950. The accumulation of important newresults led the Armour Laboratories to the conclusion that it would be constructive to call aSecond Conference. This was held in Chicago on December 8th and 9th, 1950 and 102 paperswere presented. The «Proceedings» of this Conference, excellently edited by Dr. John R. Mote,have just been published by the Blakiston Company in two comprehensive volumes.

The first volume, designated as «Research», deals mainly with fundamental aspects. Thepituitary gland secretes «large molecule ACTH», but the «small molecule high potency* productnow available has the same general physiologic adrenal-cortex stimulating effect (P.H. Forshamet al.). The interesting results of N. B. Talbot and his group suggest the probability that in thehuman being there are at least two different active adrenocorticotropic hormones, oneconcerned with 11-17-oxycorticosterone- and the other with 17-ketosteroid-formation. Importantresults concerning the bio-assay and the chemistry of adrenal cortical
steroid secretory and urinary excretory products are given by Gr. Pincus, D. H. Nelson and their associates. It appears that the adrenal cortex secretes Compound F or hydroxycortisone and corticosterone. The important investigations of a. o. / T. Nathanson, K. Dobriner, J. W. Jailer show that adrenal corticoids may be metabolized in different ways, thus patients with different diseases may excrete steroid degradation products, that are not normally excreted. A number of very interesting papers deals with problems concerning the relationship between AGTH, kidney function and electrolytes. R. J. Wedgwood carried out careful experiments showing that the development of glomerulonephritis in rabbits treated with bovine serum gamma globulin can be prevented by ACTH, in spite of the fact that antibodies are produced in normal amounts and in spite of the evidence for the interaction of antigen and antibodies. The author assumes that ACTH inhibits in some way the capacity of the tissues to react. Another series of enlightening lectures concerns metabolic problems, such as the relationship of ACTH to nitrogen-, carbohydrate-, fat- and vitamin-metabolism. ACTH has a great influence on the functions of the liver, a. o. on the iron- and porphyrin-metabolism. Adrenal corticoids may play a vital role in the functions of the liver and the hemopoietic system. The seven papers of the next group concern «infection, immunology and hypersensitivity». These lectures are of greatest value to allergists. A. C. Woods and R. M. Wood show the profound blocking effect ACTH and Cortisone have, when administered parenterally, on ocular inflammatory and exudative reactions caused by protein anaphylaxis, bacterial allergy or, in tuberculous eyes, by tuberculoprotein. Both hormones inhibit the inflammatory reaction produced in the eye by primarily irritant matter such as glycerin or jequirity extract. Cortisone, when injected locally in the anterior chamber, has the same inhibitory effect by causing a direct action on the mesenchymal tissue. In infections ACTH may inhibit tissue reactions but the pathogenic organisms remain unaltered. It is possible that under certain circumstances ACTH can mask important symptoms and signs of acute infections and do harm in this way. As a. o. Maxwell Finland et al. and B. F. Masell and his co-workers showed ACTH does not seem to alter the obvious mechanisms of immunity, such as antibody production and release, and general resistance to infection and toxicity. Consequently, the suppression of the rheumatic fever-process by ACTH cannot be caused by a reduction in streptococcal antibodies. A paper of certain importance was presented by D. Grab and associates from the Johns Hopkins Hospital, showing that the treatment of asthmatic patients with ACTH promptly diminishes the reactivity of the bronchial tissues to the specific antigens (pollens, spores, feathers, dust). At the same time the reactivity of these tissues to mecholyl and histamine was not reduced. Discussing this paper, M. S. Segal, S. Feinberg, E. Fischel a.o. gave further interesting data concerning the effect of ACTH on allergic processes. On the basis of metabolic studies Bram Rose and his associates assume that asthma of the intrinsic type is partly caused by a hypofunction of the adrenal cortex.

The second volume, «Therapeutics», contains 53 contributions concerning the clinical use of ACTH-Armour. The development of longacting ACTH preparations is rapid and we can soon expect preparations requiring only one injection per day. E. S. Gordon and his associates showed that a rapid and maximal adrenal cortical stimulation can be obtained with minimal doses of ACTH by the continuous intravenous drip method. The important paper of Eleanor H. Venning, L. G. Johnson and Bram Rose deals with the adrenal cortical function in rheumatoid arthritis and asthma. The results suggest that there may be a relative adrenal cortical hypofunction or insufficiency. W. Q. Wolfson and his co-workers reported important observations concerning the occurrence of functional «corticogenic» hypothyroidism in patients treated with ACTH. The results indicate that thyroid
hormone may be necessary for some cases in order to maintain the beneficial effect of the ACTH therapy. The treatment with ACTH of metabolic, hemopoietic, liver and surgical diseases and malignancy is thoroughly reviewed in a number of outstanding contributions. In our field the papers of D. M. Hume et al., M. J. Whitelaw, F. H. Adams and his co-workers are of great interest. These papers show the great importance of ACTH treatment in surgical shock and discuss the numerous factors which must be carefully observed in these severe stress situations. The contribution of Ch. A. Le Maistre and his co-workers deals with the effect of cortical stimulation in patients with acute laryngeal and pulmonary tuberculosis. During the period of administration of ACTH or Cortisone, rapid symptomatic amelioration and complete defervescence were observed, but tubercle bacilli were not altered. After cessation of the treatment all signs and symptoms of the disease reappeared immediately with more severity than before treatment. E. H. Kass and his associates found, in sickle-cell anemia and experimental malaria disease conditions which appeared to be made distinctly worse when treated with ACTH; as also did W. D. Sutliff and St. L. Norman in systemic blastomycosis. Five contributions are devoted to «hypersensitivity». The important problem of allergy to ACTH is thoroughly discussed in the paper of E. M. Brown and /. L. Hollander. The incidence of allergy produced by the administration of ACTH is relatively small but the reactions are occasionally severe. Antihistaminics are of value in controlling these reactions. The substitution of beef for pork ACTH allows continuation of the treatment. In certain cases Cortisone can be given or a hyposensitization with pork ACTH tried. L. E. Shulman and his associates and M. S. Segal and /. A. Herschfus reviewed their clinical studies with ACTH in bronchial asthma. Through these outstanding studies the previous results in this field have been fully substantiated. 80 per cent of the patients under treatment for the first time got relief but the length of remission varied greatly. The optimal dosage according to present experience should be within the limits of 500–800 milligrams given over a period of 10 to 15 days. Segal and Herschfus point out the important fact that we at this date cannot be certain that «the production of repeated remissions with ACTH therapy is entirely without hazard». Observations over a long period are here necessary. In cases of severe status asthmaticus, ACTH and Cortisone are no doubt life-savers and in many other cases the use of them often succeeds in shortening the course of the disease considerably and gives the possibility of introducing an etiologic therapy. In other acute and severe hypersensitivity states of various types, chiefly drug-allergy, treatment with ACTH has the greatest value. In their valuable contribution M. Roche and his co-workers bring evidence to support the fact that ACTH inhibits the lepromatous lepra reaction; this may be of great importance in the chemotherapy of leprosy. A number of other contributions shows the great value of ACTH in the treatment of inflammatory diseases, such as certain eye-diseases and ulcerative colitis, and collagen diseases such as rheumatic processes and periarteritis nodosa. Finally it can be mentioned that ACTH treatment is of benefit in intoxications caused by spider- or snake-bite; it also inhibits beryllium granulomatosis, and, under certain circumstances, silicosis.

A number of different and otherwise unmanageable diseases can be controlled by treatment with ACTH and Cortisone. As the Editor of the present volumes states, the results are the most encouraging in more self-limited diseases, when treated at the onset. ACTH and Cortisone have already saved lives, shortened and relieved severe suffering and prevented invalidism in many thousands of cases. Their main value is nevertheless that they allow the studying of various
physiologic and pathologic processes in a hitherto uncomparable way and make the understanding of their nature possible. It can be hoped that future research will bring to light the certain powers which are active in the various diseases. «Disease» is a sum of reactions of a living organism to a certain noxious factor. All disease symptoms are, independent of the kind of noxious agent, expressions of functional and structural disturbances of the diseased organism. It seems that ACTH and Cortisone greatly influence the reactivity of organisms and in this way interfere with a number of disease processes of different origin. It is obvious that we must learn more about the physiological functions of these hormones and the metabolic processes they influence.

Dr. Mote writes: «Phenomenal progress has been made, but there is still tremendous amount of work ahead». I am tempted to add that a great part of this indeed phenomenal progress has only been made possible through the untiring efforts of the Scientific Staff of the Armour Laboratories and the unselfish sponsorship of Armour and Company.

The print and illustrations of the «Proceedings» are excellent. These volumes are indispensable to anybody interested in medical progress.

Paul Kallós, Helsingborg.


Under sponsorship of the Chemical Specialties Co., Inc., New York, N. Y. and the Syntex S. A., Mexico, D. F., a “First Annual Steroid Conference” was held in Cuernavaca, Mexico, January 15-18, 1951. The Conference dealt with laboratory and clinical experiences with the 11-desoxy-steroids. The present volume contains not only the 24 papers given by invited speakers at the Conference, but also the often very interesting discussion which occurred after the presentation of the various papers.

Hans Selye reviews the pharmacology of this group of steroids, chiefly Δ5-pregnenolone, 21-acetoxypregnenolone and desoxycorticosterone. Gr. Pincus and his collaborators deal with the adrenal function in subjects receiving cortisone- or pregnenolone-therapy. A. Zaffaroni treats in a very interesting paper the secretory products of the adrenal cortex. A number of other contributions is devoted to therapeutical problems. The therapeutical efficiency of pregnenolone and related steroids is as yet not so well established and the papers are chiefly on the research plane. The interactions between the anterior pituitary and the 11-desoxy-steroids and those between pregnenolone and cortisone are very interesting and the reviewer is convinced that Selye’s statement, that “promising avenues for future research along these lines have been outlined” is correct. In the interest of future research in this important field it is to be hoped that the “Steroid Conferences” will really be held annually and that the Proceedings will be available as soon and as well edited and printed, as the present volume. Paul Kallós.

Corrigenda

Due to an error in phrasing an article which appeared in Vol. 2, Fasc. 2 (1951), page 147 has been attributed to Pepys and Duveen. The title should read: «Negative Skin Tests in Allergic Rhinitis and Nasal Polyposis.» By /. Pepys, M.R.C.P. (Lond. and Edin.). – (G. E. Duveen student, University of London.) The work reported on was carried out during the tenure of the G. E. Duveen studentship by the author – /. Pepys.