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ABSTRACTS

This section of the JOURNAL is published in collaboration with the abstracting journal, ABSTRACTS OF WORLD MEDICINE, published by the British Medical Association. In this JOURNAL some of the more important articles on subjects of interest to clinical pathologists are selected for abstract, and these are classified into four sections: bacteriology; biochemistry; haematology; and morbid anatomy and histology.

BACTERIOLOGY

Toxoplasma Infection in English Children. A Survey with Toxoplasmin Intradermal Antigen. FISHER, O. D. (1951). *Lancet*, 2, 904.

The skin reactions to toxoplasmin were studied in 100 children at the Hospital for Sick Children, Great Ormond Street, and in 639 mentally-defective children and 59 mentally-defective adults at the Fountain Hospital, London, and were related to the presence of *Toxoplasma* antibodies in the serum. The methods of preparation of the antigen and control solutions are detailed. The optimum dosage of antigen was found to be 0.1 ml. of a 1 in 500 dilution. The criteria which the author adopted in judging the significance of a skin reaction are fully defined.

Of the 739 children, 38 were found to be sensitive to toxoplasmin, and in all 38 evidence of the presence of antibodies in the serum was provided by the "dye test" [presumably that of Sabin and Feldman (*Science*, 1948, 108, 660)]. Complement-fixation tests, however, gave either negative or weakly positive results. The serum was examined in 116 of the 701 patients with negative skin reactions; in 1 case the presence of antibodies was indicated by the dye test and a weakly positive complement-fixation reaction. Of the adults tested 20 gave positive skin reactions, but no sera were examined. The incidence of positive skin reaction was found to rise steadily with age.

The author concludes that the determination of toxoplasmin sensitivity is a useful screening test for the diagnosis of toxoplasmosis, a positive skin reaction together with positive findings in the dye test indicating a previous infection, and a significant titre in the complement-fixation reaction being presumptive of an extensive and often clinically obvious infection.

[The importance of this paper lies in the indication that there may be in Great Britain the same high incidence of latent toxoplasmosis as has already been shown to exist in the United States, and in the confirmation of the reliability of the toxoplasmin skin test for detecting these cases. There is an apparent contradiction as between the discussion of the findings, where it is stated that in 1 case a positive skin reaction was obtained in the absence of antibodies, and the detailed description of the findings, where it is stated that in every case in which the skin reaction was positive the dye-test titre was greater than 1 in 4.]

H. G. Farquhar.

Control of Pertussis in Day-nursery Contacts with Chloramphenicol. BOGDAN, A. (1951). | *Lancet*, 2, 1204.

At the Westminster Children's Hospital 11 susceptible contacts of pertussis were given 125 mg. of chloramphenicol 6-hourly for 6 days during the incubation period or early paroxysmal stage; treatment was then changed to a special cholesterol-coated tablet of chloramphenicol containing 100 mg., which was given for a further 6 days. In 2 cases no symptoms developed, in 6 the disease was arrested at the pre-paroxysmal stage, and in 3 it showed no modification. The value of bacteriological examination in making an early diagnosis is stressed, for the results seemed better in those treated at the end of the incubation period or early in the paroxysmal stage. There were no adequate controls.

[The abstracter found it very hard to check the different figures in text and tables owing to the discursive style adopted. This method of treatment may have very important applications, so that it is hoped that the ultimate results of the investigation carried out by this special clinic will be described in more precise detail.]

T. Anderson.

Aureomycin and Chloramphenicol in the Treatment of Zoster. SCHAFFER, G., and SVENDSEN, I. B. (1951). *Ugeskr. Laeg.*, 113, 1537.

This paper reports the result of treatment of 16 cases of herpes zoster with aureomycin (dose, 500 mg. 4 times a day for 4 days), and 8 cases with chloramphenicol (dose, 2 to 4 g. a day for 3 to 7 days). Alternate cases were used as controls. The course of the illness did not differ significantly in the treated and the control groups, either in respect of skin phenomena or of neuralgic pains.

W. G. Harding.

BIOCHEMISTRY

Renal Function during and after Diabetic Coma. BERNSTEIN, L. M., FOLEY, E. F., and HOFFMAN, W. S. (1952). *J. clin. Invest.*, 31, 711.

At the University of Illinois College of Medicine studies of renal function by modern clearance techniques were carried out on 6 patients in diabetic coma. Two types of response could be recognized. Group I (4 cases) showed a reduction to below normal of all clearances, but these were restored to normal or above

normal in a day or two when the dehydration and the electrolyte changes had been corrected; azotaemia subsided promptly. Group II (2 cases) showed an azotaemia which became more intense in spite of correction of the metabolic deficits. Renal clearances remained low for much longer than in the first group. Though *p*-aminohippuric acid (PAH) clearance is usually reduced in diabetic coma, a normal PAH extraction (T_m PAH) is at least possible in the presence of severe diabetic acidosis.

The changes seen in Group I indicated that both glomerular and tubular functions were depressed but were quickly restored to normal. They are best interpreted as showing the renal effects of dehydration and associated decrease of cardiac output. In these an effective PAH extraction is assumed. The findings in Group II showed that there was poor PAH extraction, and this is considered to be due to damage to the tubules with interstitial oedema, constituting a form of lower nephron nephrosis. This condition was relatively mild, but the patients took about 2 weeks to recover.

C. L. Cope.

HAEMATOLOGY

The Effects of the Folic Acid Antagonists and 2 : 6-Diaminopurine on Neoplastic Disease, with Special Reference to Acute Leukemia. BURCHENAL, J. H., KARNOFSKY, D. A., KINGSLEY-PILLERS, E. M., SOUTHAM, C. M., MYERS, W. P. L., ESCHER, G. C., CRAVER, L. F., DARGEON, H. W., and RHOADS, C. P. (1951). *Cancer*, 4, 549. Bibliography.

The authors record their observations on the treatment at the Memorial Center, New York, of 162 patients suffering from neoplastic disease with folic acid antagonists and 2 : 6-diaminopurine. Of 88 patients (60 children and 28 adults) suffering from acute leukaemia a good clinical and haematological response was obtained in 20, all but 1 being children, on treatment with folic acid antagonists, or 2 : 6-diaminopurine or both. (An additional group of patients with acute leukaemia comprising 37 children and 10 adults treated similarly since November, 1949, brought the total number to 135, of which the children showed a remission rate of 32% and the adults one of 2.6%, but owing to the shortness of the observation period these cases are omitted in the detailed discussion of results.) The authors point out that in these patients a good response to this type of therapy was associated with a significantly longer survival time than was a partial or poor response. Improvement occurred in 4 of these patients who were treated with 2:6-diaminopurine, alone or in combination with folic acid antagonists, but in 25 others no improvement was recorded. No conclusions are drawn as to the effectiveness of this drug. Of 7 children with lymphosarcoma and 2 with generalized reticulo-endotheliosis, 3 of the former and both of the latter showed improvement following treatment with folic-acid antagonists.

In 65 cases of other types of neoplastic disease, which included chronic and subacute leukaemia, Hodgkin's

disease, mycosis fungoides, myeloma, carcinoma of the breast, lung, bladder, testis, and stomach, melanoma, and osteogenic sarcoma, no beneficial effect was noted.

R. Winston Evans.

Haemolytic Jaundice in Malignant Disease (Leukaemia, Granulomatosis, Carcinoma). PARAF, A., and DAUSSET, J. (1952). *Sem. Hôp. Paris*, 28, 290. Bibliography.

A man of 56 developed an acute haemolytic anaemia with jaundice, splenomegaly, and a positive Coombs reaction. The cause of the haemolytic episode could not at first be determined, and the patient recovered spontaneously after blood transfusions. Two months later there was obvious lymph-node enlargement and he was found to have a reticulosarcoma, from which he died after another 6 months.

The authors have collected from the literature 80 cases of haemolytic anaemia appearing during the course of leukaemia, Hodgkin's disease, and other forms of malignant disease. In 15 cases haemolytic anaemia was the initial manifestation of the disease; in others it seemed to follow treatment with drugs or x rays, and sometimes it was a terminal event. Splenectomy was performed in 18 cases, and in 9 of these the anaemia recovered promptly and permanently, but the remaining patients became anaemic again. The pathological features of these cases are summarized.

P. C. Reynell.

Effect of Vitamin-K Preparations on Hypoprothrombinaemia Induced by Dicoumarol and Tromexan. DOUGLAS, A. S., and BROWN, A. (1952). *Brit. med. J.*, 1, 412.

This is a report of the results of an investigation at the Royal Infirmary, Glasgow, into the effects of certain vitamin-K preparations in reducing the anticoagulant effect of dicoumarol and "tromexan" in the human subject. The substances tested were vitamin K_1 and various vitamin-K analogues—namely, menaphthone, acetomenaphthone, "kapilon," "synkavit," and water-soluble K analogue. Each test was carried out by administering an effective dose of the anticoagulant to a suitable patient. The prothrombin time was estimated daily by the one-stage method of Quick with rabbit-brain thromboplastin. When the response to the anticoagulant had passed off and the prothrombin time had remained normal for 2 to 3 days the same dose of the same anticoagulant drug was repeated and a vitamin-K preparation was given before, after, or at the same time as, the administration of the anticoagulant.

It is concluded that although the synthetic vitamin-K analogues may at times modify the effect of coumarin derivatives, their action is too unreliable and too slight to justify their being used as antidotes in a hypoprothrombinaemic emergency arising during anticoagulant therapy. Vitamin K_1 , on the other hand, was found to be capable of completely blocking the action of therapeutic doses of dicoumarol and "tromexan," and capable of correcting, within a few hours, excessive hypoprothrombinaemia due to these drugs.

L. J. Davis.