

exposure time. Inefficient, in comparison with the older method of superficial x-ray therapy (80 to 100 kV; 10-inch distance; 0.5 to 1 mm. aluminium filter), in that the percentage depth dose is not so good and the dose at the edge of any but the smallest field is vastly inferior.

In the treatment of superficial malignancy 80 to 100 kV x-ray therapy has been used with complete success for very many years, and the cosmetic results are excellent. Failure is due to imperfect localization of the beam, or, more commonly, to under-dosage. Moreover, such apparatus is available almost everywhere. Why, then, this loud cry for universal adoption of "contact" therapy until the method has been perfected? When the manufacturers and physicists give us apparatus with a "differential" filter or some other means which will provide for homogeneous dosage over the whole field, treatment of surface cancer by this method will truly be the treatment of choice.—I am, etc.,

Hull, Aug. 17.

R. HERMON.

Lipo-peptone in Asthma

SIR,—Protein exists in two forms: pure protein, and protein united with lipins (lipoids) or carbohydrates (polysaccharids), haptens, as Landsteiner called them (from *ἀπτειν* to bind). These haptens, says Professor O. Thomsen,¹ can fix antibodies *in vitro*, but are unable to produce them on injection, unless combined with proteins, when antibodies for each can be demonstrated. Landsteiner and Simms² showed that if lipin is injected into the vein of one ear of a rabbit, and the foreign protein (hog serum) into the other at the same time, no effect is produced, but when simply *mixed* an efficient heterogenetic antigen is constituted. The heterogenetic antigens of Forssmann are of this type, and are widely distributed in the animal kingdom. (Forssmann found that when a watery emulsion—lipoid—from guinea-pig organs is introduced parenterally into rabbits, a highly effective haemolysin is produced for sheep corpuscles.) Presumably, says Wells,³ this union which activates the hapten so readily is physical. Commercial lecithin must be used, as shown by Sachs, Klopstock, and Weil⁴; purified lecithin being inactive.

Haptens are capable also of a special kind of antigenic function. The capsule of the pneumococcus has a structure composed of carbohydrates, the variation of which is found in Types I, II, and III. Schiemann and Casper⁵ immunized mice to the pneumococcus by the injection of this pure carbohydrate. Tubercle bacilli, as shown by Laidlaw and Dudley,⁶ also yield an immunologically specific carbohydrate, and in the Wassermann reaction lipins can be substituted for true antigens. All the cells of the body contain lipin (and cholesterol) with which proteins are combined probably by an ester union between protein and phosphoric acid to make lecitho-protein.

It was found by Fleischmann⁷ that ox serum, digested with trypsin or pepsin until no biuret action took place, will react with the serum of man and different animals. The reaction, therefore, of peptones is much wider than that of proteins. The reagins of allergic subjects,

according to Coca, are only found in man. They are immune bodies, not sharing complement fixation and are inactive with uterine muscle; they react with peptone. In view of the heterogenetic antigens provided when lipins combine with protein, the question arises whether this transformation occurs when combined with peptone.

The lipins appear to unite with the primary proteose. Two c.cm. of a 2 per cent. colloidal solution of lecithin, together with 0.12 gramme of powdered cholesterol, are agitated with 28 c.cm. of 5 or 7.5 per cent. of the clear aqueous solution of Witte's peptone 30. Adding a little chloroform, this stands for twenty-four hours, when it has a cloudy appearance from lecithin which is permanent. There is a slight deposit, stated by Maclean⁸ to be mainly an adsorption compound of part of the proteose. A reaction obviously occurs, as when tested the peptone solution reveals little diminution in primary proteose; when no primary proteose is originally present the solution above the precipitate becomes quite clear after a time.

This lipo-peptone injected intramuscularly gives very good results when the asthma is not removed by getting rid of some of the foods or sources of inhalants.—I am, etc.,

London, W.1, August 15.

A. G. AULD.

Abdominal Rigidity

SIR,—It has been denied that abdominal rigidity exists without there being some acute inflammatory change within—for example, an inflamed appendix, gastric ulcer, cholecystitis, or abdominal new growth or mechanical hold-up or twist, vascular or otherwise. Some surgeons, even Professor Grey Turner, deny the existence of gastric influenza, alleging that biliary disorder is present to account for the symptoms. That this is incorrect can be vouched for by the incidence and rapid response to treatment during the seasonal epidemics so commonly experienced in general practice. It is important not to miss acute appendicitis calling for early operation, and where abdominal rigidity exists there is real temptation to regard the case as one of appendicitis; but to remove an appendix from a patient with gastric influenza might easily result in disaster. To find a patient of 15 suffering from sea-sickness with a rigid tender abdomen with great pain and vomiting is also a source of anxiety. How is one to make a diagnosis?

First, one must be quite sure that rigidity of the abdomen does occur in both gastric influenza and sea-sickness. Fifteen years of practice and personal experience of both conditions convince me that it does occur, and a careful estimate of the number of cases seen in both conditions runs into hundreds. Four voyages as surgeon, two in liners, have formed the basis of my observations on sea-sickness. Symptoms dating from embarkation, and anorexia, are of real diagnostic value. When appendicitis occurs during epidemics of gastric influenza or rough weather at sea the following points are of help in differentiation. The patient usually looks more acutely ill than the other patients in the epidemic or the other sea-sick patients. To rule out appendicitis the temperature, pulse, rigidity, and symptoms *must abate within a period wholly incompatible with a diagnosis of appendicitis*—that is, a few hours to half a day. Rectal examination may give signs of appendix abscess. In gastric influenza bed, bland diet, bismuth and aspirin and quinine will produce the change in symptoms and condition. Warmth, bed, hot bottle, atropine 1/100 grain by mouth, thrice daily, and a saline and glucose enema will produce a

⁸ Maclean, H. and I. S. (1927). *Lecithin and Allied Substances*, p. 34.

¹ Thomsen, O. (1931). *Antibodies in the Light of Recent Investigations*, p. 14.

² Wells, H. G. (1929). *The Chemical Aspects of Immunity*, pp. 62, 63.

³ *Ibid.*

⁴ Sachs, Klopstock, and Weil (1925). *Dtsch. med. Wschr.*, 51, 590.

⁵ Schiemann and Casper (1928). *Z. Hyg.*, 108, 220.

⁶ Laidlaw and Dudley (1925). *Brit. J. exp. Path.*, 6, 197.

⁷ Thomsen, O. *Loc. cit.*, p. 52.

dramatic improvement, often in half an hour to two hours, if the case is one of *mal de mer*. Should rigidity persist and there be no headache with the onset (this last has invariably been present in the less serious medical states) then one must concentrate on the treatment for appendicitis. Even if the abdomen is soft, temperature and pulse normal, and tenderness and pain are present this diagnosis is probable—especially in children, where delay is fatal.—I am, etc.,

Hove, Aug. 20.

J. HARTSILVER.

Bee-sting Anaphylaxis

SIR,—The following account of a personal experience of bee-sting anaphylaxis may be of interest:

In May, 1937, I was given a series of pneumococcal immunogen injections for post-operative pneumonia. Six weeks afterwards, when going through a hive, I received about six stings simultaneously. Almost at once I experienced violent tingling all over; marked constriction across the chest; dyspnoea, swelling of lips and tongue, and a tightening of neck muscles; intense palpitations and a profuse generalized erythematous and urticarial rash. I felt decidedly ill.

Previously when stung I have had a moderate local reaction, and since that unpleasant attack have had one or two isolated stings without marked effect.

Might it not be possible that owing to the recent injections I had become sensitive to foreign proteins, even if not specific. This possibility might account for the peculiar fact that hardened apiarists sometimes become suddenly sensitized to bee-stings.—I am, etc.,

Exeter, Aug. 16.

R. K. FOULKES.

Sodium Sulphate for Infected Wounds

SIR,—After reading a communication about sodium sulphate in the *British Medical Journal* some years ago, I began using it here, where we often see septic wounds already several days old and where the "first-aid dressing" has frequently had a basis of cow-dung. I should like to endorse what Dr. J. C. Lyth has said in its praise in your issue of July 8 (p. 89); with growing experience I use other dressings less and less in the presence of severe sepsis.—I am, etc.,

Kamdara, Bihar, Aug 8.

N. P. BRUCE.

Universities and Colleges

UNIVERSITY OF LONDON

The Senate has appointed Viscount Dawson of Penn a member of the Court in the place of Professor F. Horton, F.R.S., for the period of Professor Horton's term as Vice-Chancellor. Lord Dawson has resigned his membership of the Senate as a representative of the Faculty of Medicine in view of his appointment by the Senate as a co-opted member.

Dr. A. E. Clark-Kennedy has been appointed a Governor of Queen Mary College.

Recognition of Teachers

The following have been recognized as teachers of the University in the subjects indicated in parentheses: *St. George's Hospital Medical School*: Dr. Desmond Curran (Mental Diseases); Dr. C. M. Gwillim (Obstetrics); Dr. C. K. Pinckney (Diseases of Children); Dr. K. Robson (Medicine). *St. Mary's Hospital Medical School*: Dr. I. H. Maclean (Bacteriology); Dr. D. M. Pryce (Pathology). *Westminster Hospital Medical School*: Dr. H. J. Ewen (Psychological Medicine). *King's College Hospital Medical School*: Dr. T. K. Lyle (Ophthalmology). *London School of Hygiene and Tropical Medicine*: Dr. J. C. Cruickshank (Bacteriology).

Diplomas in Clinical Pathology

The regulations for the Academic Postgraduate Diploma in Clinical Pathology have been amended for examinations in and after 1940.

Biology at First M.B. Examination

The syllabus in general biology at the first examination for medical degrees for external students (*Blue Book*, September, 1938, p. 816) has been amended by the deletion of the first paragraph under the heading "General Biology" and by the substitution therefor of the following:

The whole subject is to be treated in an elementary manner, with particular regard to the inculcation of general biological principles and to the subsequent work of the student. It should be noted that an equal amount of time is given to the written and practical examinations, and that equal importance is attached to the candidate's performance in each.

King's College

The following appointments have been made at King's College:

Lecturers in Physiology: E. F. McCarthy, M.B., B.Ch., and D. B. Taylor, M.B., B.Ch. *Demonstrator in Anatomy*: J. P. Bentley, M.B., B.S. *Demonstrator in Physiology*: D. J. N. Smith, M.B., B.S. *Medical Officer to King's College Theological Hall*: G. Hale, M.B., B.Chir.

The honorary secretary of the Lausanne Medical Graduates' Association informs us that the following medical practitioners have recently been approved for the M.D. degree at the University of Lausanne: G. R. M. Apsey, A. J. C. Eland, R. Robins-Brame, and D. K. Sundaresan.

The Services

DIRECTOR-GENERAL R.A.F.M.S.

The Air Ministry announces that the status of the Director of Royal Air Force Medical Services has been advanced to that of Director-General with the rank of Air Marshal. Air Vice-Marshal Sir Victor Richardson, K.B.E., C.B., D.P.H., K.H.S., Director of R.A.F. Medical Services, has become Director-General and has been promoted to the rank of Air Marshal, with effect from August 1.

DIRECTOR AND PROFESSOR OF PATHOLOGY, R.A.M. COLLEGE

Lieutenant-Colonel and Brevet Colonel L. T. Poole, D.S.O., M.C., K.H.P., late R.A.M.C., has been selected for promotion to colonel and to succeed Major-General H. M. J. Perry, C.B., O.B.E., K.H.S., as Director and Professor of Pathology at the Royal Army Medical College, Millbank, S.W., on the retirement of the latter from September 26.

HONORARY PHYSICIAN TO THE KING

Surgeon Rear-Admiral Thomas Creaser, R.N., has been appointed Honorary Physician to the King.

DEATHS IN THE SERVICES

Lieutenant-Colonel CHRISTOPHER BIRDWOOD MCCONAGHY, I.M.S. (ret.), died at Camberley on August 9, aged 62. He was born on March 25, 1877, the son of the late Surgeon-General W. McConaghy, Bombay Medical Service, and was educated at Edinburgh University, where he took the degrees of M.B., Ch.B., in 1900. Entering the Indian Medical Service as lieutenant on June 27, 1901, he became lieutenant-colonel on December 27, 1920, and retired on May 24, 1930. After three years' military service he entered the medical branch of the political department and served successively as residency surgeon at Baghdad, June, 1904, Bushire and the Persian Gulf, November, 1909, and Bhopal, September, 1914. From May, 1916, to May, 1918, he was on military duty serving in Iraq, and received the medals for the war of 1914-18. In June, 1918, he returned to the political department, and served as residency surgeon in the Eastern Rajputana States, June, 1918, Bhopal, January, 1919, and legation surgeon in Nepal from March, 1926, until his retirement. He had been a member of the British Medical Association for seventeen years.