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K. B. ROGERS

with a pencil point. The ovum was seen to burst, the granular contents flowed out, and the general appearance was completely altered when the pressure was released. The photographs illustrate the changes that occur: A is the untouched ovum, B after very light pressure, and C after the slightly greater pressure that is usually exerted to make the cover slip lie flat.

This observation may explain why some ascaris ova are difficult to recognize, and it would be best when looking for these ova to make a conscious effort to avoid exerting any pressure on the cover slip.

I should like to thank Mr. J. G. Williamson, the photographer to the Birmingham Children’s Hospital, for his co-operation and excellent photographs.

REFERENCE

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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


The authors treated with oral polymyxins 23 mentally defective children who were either asymptomatic carriers or chronically infected with Shigella flexneri. Organisms were isolated throughout the investigation. Polymyxin B or E was given in 3 divided doses daily (total 15 to 20 mg. per kg.) for 10 days. All stool cultures were positive at the outset and negative at the end of polymyxin treatment; during the subsequent 8 weeks of isolation stools became positive in only 3 of 23 cases. These results compare favourably with those obtained in 49 similar cases treated with sulphonamides or other antibiotics. No toxic side-effects of polymyxin were observed, suggesting that no significant gastro-intestinal absorption took place.

The authors consider that this drug might be used to treat the entire population of institutions with a high endemic incidence of bacillary dysentery. Peter Story.


Different species of bacteria survive for greatly varying periods of time on cotton-wool swabs (as sent to laboratories for examination). The amount of moisture in the swab and the batch of cotton-wool used influence the survival times, but not uniformly for all bacterial species. A new type of swab was devised and found valuable for routine use, as it favoured the survival of bacteria, with the possible exception of Neisseria. Wool was rolled on wooden applicators and dipped in ox serum. After drying in an incubator the swabs were sterilized in the autoclave. This treatment made the cotton-wool adhere firmly to the swab stick.

Scott Thomson.


The material is spread thinly on a slide and dried in the air. Neither heat nor fixation is necessary. Stain with a saturated aqueous solution of the disodium salt of dibromo-hydroxymercuri-fluorescein (mercurochrome) for 5 minutes. After the mercurochrome, stain for 5 minutes with a saturated aqueous solution of pyoktanin (Merck's methyl violet). Wash in water and dry. Both stain solutions keep indefinitely and can be made with either ordinary or distilled water. At least 3 minutes in the stains should be given, but after that time the exact duration does not matter. Differentiation is not possible and the pH of the solutions used makes no difference, so that the method is simpler than the methods of Gram and Giemsa.

The spirochaetes are stained an intense bluish-black on an unstained background, but the fusiform bacilli often present with them, and also cells and other microorganisms, take the stain with the same intensity. Details in the organisms are not made visible, but the outlines of the spirochaetes are well preserved. The spirochaetes appear about one-fourth as big again as those stained by silver-impregnation methods, about half as big again as those stained by the methods of Griesbach or Tunncliff, and almost twice as big as those stained by the methods of Gram or Giemsa.

G. Lapage.

BIOCHEMISTRY


The results of 16 renal function studies on 8 severely burned patients are reported. All the patients were given adequate treatment, including administration of fluid, and only one of them died. An unusual pattern of renal function was observed, characterized by an increased glomerular filtration rate, a normal renal plasma flow, and an increased filtration fraction. The return to normal function took as long as 2 to 2½ weeks. During the same period the maximum tubular excretory capacity remained within normal limits. The mechanism of these alterations is unknown. The authors, however, discuss some physiological factors that may work in the same direction, such as overhydration, increased thyroxin output, hyperadrenalism, pyrogenic response, hypoprotnaemia, and increased adrenaline activity. They point out that similar functional changes have been observed after major surgical operations in the immediate post-operative period.

A. Swan.


The authors kept 13 patients suffering from classical gout under observation in hospital. Daily estimations
of plasma uric acid and urinary uric acid were made before, during, and after administration of drugs which were known or believed to influence uric acid levels in blood and urine. The drugs administered were colchicine, sodium salicylate, glycin, "carinamide," cinchophen, and "probenecid." Carinamide (phenylmethane sulphonanilide) was used because it might reduce tubular resorption of uric acid by the kidneys. These drugs were given over 3-day periods.

It was found that while colchicine was clinically effective it only reduced the plasma uric acid in 3 of 12 patients and increased the urinary uric acid in 2. Sodium salicylate reduced the plasma uric acid in 8 of 12 patients; glycin caused a fall in plasma uric acid in 6 and an increase in urinary uric acid in 5. Six patients received 0.5 g. of carinamide 4-hourly. None of them showed a decrease in plasma uric acid, but in 2 the urinary uric acid rose; when the dose to 3 patients was quadrupled all showed a fall in plasma uric acid and 2 a rise in urinary uric acid. Cinchophen caused a fall in plasma uric acid in 10 of 11 patients and a rise in urinary uric acid in 6. Probenecid caused a fall in plasma uric acid and a rise in urinary uric acid in all of 8 patients.

W. Tegner.

HAEMATOLOGY


Two freeze-dried, Seitz-filtered preparations of thrombin derived from pooled human plasma have been found to be associated with the agent of homologous serum hepatitis. In the epidemic recorded in this paper all the 221 cases arose post-operatively over a period of 10 months in patients in one hospital where absorbable gelatin sponges soaked in human thrombin had been used. The epidemic followed a change from bovine to human thrombin. The incubation period in these cases varied from 66 to 137 days, with a mean of 103 days. One patient died as a result of the infection.

Similarly contemporary epidemics of hepatitis were observed in two nearby hospitals which had employed human thrombin preparations for surgical purposes.

G. Payling Wright.


References have been traced to about a dozen cases in the literature showing cryoglobulinæmia, a term which implies the presence in the plasma of a globulin which precipitates or solidifies on cooling to about 30° C. The phenomenon is reversible on warming to 37° C. and the changes may be repeated indefinitely. Such globulins occur in multiple myelomatosis and have also been found in endocarditis lenta, kala-azar, nephrosis, and in infective arthritis. In the case reported here the diagnosis of multiple myelomatosis was suggested by the finding of cryoglobulinæmia. The author reviews the hitherto published observations on the serum containing this abnormal globulin, and also discusses the nature of this abnormal protein occurring in multiple myelomatosis.

S. Karan.


Attention is drawn to Pilot's fluid for the enumeration of eosinophils. Counting is much easier and quicker than with Randolph's fluid, while the disadvantage of Rud's fluid is also overcome. A source of error in the use of the fluid is the clumping of leucocytes on standing. This may be eliminated by the addition of heparin to the fluid in the concentration of one unit per millilitre. There is some evidence that this clumping is due to the formation of fibrin within the pipette.—[Authors' summary.]

MORBID ANATOMY AND HISTOLOGY


Twenty-four cases of war wounds in which squamous carcinoma developed are described. No changes occurred less than 18 years after and are still occurring 30 years after the original injury; at least 13 of the patients have died of cancer. There are 16 examples of sinus cancer, all occurring in the lower limbs or buttocks. There is a history of a long-standing sinus, with bone infection for many years, and deep in the sinus the tumour occurs; some of these tumours are highly malignant. There are 7 examples of scar cancer, all arising in thin, poorly nourished, unhealthy scars.

It is emphasized that patients with long-standing sinuses should be kept under close observation, and should carcinoma would changes supervene surgery must be radical. An unhealthy scar should be excised and, if necessary, replaced by a pedicle flap.

Peter Ring.


The recognition of cells from metastases of malignant neoplasms in bone-marrow smears is not always easy, but in a series of 100 cases of advanced malignant disease 45 showed "malignant cells," mostly in clumps, in smears of sternal or iliac bone marrow. In 21 of 35 cases of mammary carcinoma, in 3 of 14 cases of gastrointestinal carcinoma, 4 of 10 cases of lung cancer, and [surprisingly] in 11 of 21 cases of carcinoma of the genitourinary tract (which included the prostate, ovaries, and ureter) neoplastic cells were found. Another feature of this investigation was the hypoplasia or aplasia observed in the bone marrow in about 75% of cases. When the marrow showed normal or increased cellularity neoplastic cells were not found so frequently as in aphasias. Anaemia and abnormalities in the peripheral blood were seen in only 10% of cases with neoplastic cells in the marrow. Sometimes bone-marrow biopsy showed neoplastic cells even though there was no radiological evidence of metastases.

E. Neumark.