ABSTRACTS

This section of the JOURNAL is published in collaboration with the two abstracting journals, Abstracts of World Medicine, and Abstracts of World Surgery, Obstetrics and Gynaecology, 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 summarize the results of laboratory studies on aureomycin and its use in 100 cases of bacterial infections at Harvard: 186 strains of various pathogenic bacteria were tested by dilution or "streak" plate methods. Haemolytic streptococci, pneumococci, gonococci, and meningococci were inhibited by 1 µg. per ml., while staphylococci and most Gram-negative bacilli were inhibited by 25 µg. per ml., except Proteus vulgaris and Pseudomonas aeruginosa, which required a concentration of 100 to 250 µg. per ml. for inhibition. No cross-resistance with penicillin, streptomycin, polymyxin, or bacitracin was found, nor was resistance to the antibiotic readily produced either in vitro or in vivo. No aureomycin-inhibiting substance could be shown to be produced by aureomycin-resistant strains. The size of the inoculum influences the concentration of aureomycin required for inhibition of growth in the tube-dilution method of assay. The dry powder was stable at room temperature, and in aqueous solution of pH 4 there was no loss of potency after 2 weeks at 4°C. Aureomycin is most active in acid solutions and is not absorbed by the usual bacterial filters.

The antibiotic appears rapidly in the urine and is excreted for 2 to 3 days after a single oral dose of 0.5 g., the maximum concentration—up to 256 µg. per ml.—being present for 2 to 16 hours and appearing 4 to 8 hours after the dose. Plasma levels (estimated by unsatisfactory methods) of about 2 µg. per ml. were obtained with oral doses of 1 g. 6-hourly.

The clinical effect of oral administration of aureomycin in empirical dosage to 100 patients was estimated. Good results were obtained in 49 of 66 patients with gonorrhoea; failures were most frequent in those receiving 1.5 g. or less daily, but in larger doses the results compared closely with those obtained with penicillin. Four patients with pneumococcal pneumonia and one with meningococcal septicaemia were treated, and a rapid response obtained. One of 5 typhoid-fever patients improved soon after treatment was begun, and in 3 cases the response was steady and gradual and all cultures from blood, urine, and faeces were negative for Salmonella typhi after 2 to 3 days. One of 3 patients with severe salmonella infection improved rapidly but the remainder died, as did a patient with Bacterium coli septicaemia. Aureomycin was used in 16 cases of long-standing urinary infection complicated by the presence of other lesions. Pyuria disappeared in half the cases, and in most there was symptomatic relief. In some, however, strains of Proteus vulgaris, Ps. aeruginosa, and Bact. coli resistant to aureomycin appeared. Favorable results were obtained in 2 cases of non-specific urethritis.

Bacteriology


The 25 cases of lymphogranuloma inguinale treated with aureomycin fall into three groups: (1) 8 patients with buboes; (2) 3 with proctitis; and (3) 14 with benign rectal strictures. In the first group, treatment consisted of a single daily intramuscular injection of 20 mg., with in 2 cases a single injection of 20 mg. into the bubo. In all cases there was a reduction in size of the bubo after 4 days, and in the 3 in which elementary and initial bodies had been found, these disappeared after about 9 days. For the second group of patients treatment was similar, the total doses being 60, 200, and 220 mg. respectively. After 4 days 2 had lost all tenderness and discharge, and in the third rectal bleeding ceased after 8 days. Of the 14 patients in the third group, 5 had previously undergone colostomy for obstruction and one had a recto-vaginal fistula. In 12 the stricture was so pronounced that not even the tip of the finger could be inserted at the time of the patients' admission to hospital. Treatment consisted of daily intramuscular injections of 10 or 20 mg. of aureomycin, with total doses ranging from 160 to 1,000 mg. There was cessation of rectal discharge and rectal bleeding in almost all, and of tenderness in all cases. There was no change in the stricture in 11 out of the 14.

The authors regard their results as encouraging, and recommend further large-scale investigations of this antibiotic.


Forty-two patients with pulmonary tuberculosis were treated with "sulphadione." Evaluation of sulphadione treatment was based on the radiological picture, weight, erythrocyte sedimentation rate, sputum analysis, temperature range, and general condition of each patient before and after the course. Of the 42 cases, 7 were thought to have a good prognosis at the start of treatment, and all 7 patients improved; 5 patients in whom the prognosis was hopeless died. Of 8 patients with a fair prognosis 4 improved, 2 were unchanged, and 2 became worse. Of 22 with a poor prognosis 9 improved, 3 were unchanged, 4 became worse, and 6 died. Of the 42 cases 34 were sputum-positive before treatment, and 31 were still sputum-positive after treatment.

The dosage scheme was similar to that described by Majiga (see Lancet, 1948, 2, 174-180). In addition to the toxic effects he described, the present authors report
changes in the alkalai reserve of the blood, particularly in patients with a low vital capacity. In 6 cases toxic reactions necessitated withdrawal of sulphonette.

The authors believe that, while it could not be proved that the results obtained were due to sulphonette, the evidence is suggestive enough to warrant further trials in selected cases.


This report deals with an extension of previous work by one of the authors; it is shown that the incidence of penicillin-resistant strains of *Staphylococcus pyogenes* giving rise to infection in the hospital in which the work was carried out is increasing.

Specimens from 100 patients with staphylococcal infections were examined. From 59 patients penicillin-resistant strains of *Staph. pyogenes* were isolated; from 39 all colonies were resistant and from 20 both resistant and sensitive strains were isolated. Comparison with previous results showed that the incidence of patients yielding penicillin-resistant strains had risen from 14.1% in 1946 to 38% in 1947 and 59% in 1948. It was found that 34 of the 59 penicillin-resistant strains were originally isolated from 48 mixed cultures, whereas only 25 penicillin-resistant strains were isolated from 52 pure cultures. All the 59 resistant strains produced penicillinase, and strains showing a minor degree of resistance were not encountered.

Streptomycin sensitivity was tested in 97 strains: 55 were penicillin-resistant, 13 were penicillin-sensitive strains isolated in association with 13 of the resistant cultures, and 29 were penicillin-sensitive strains isolated from cases yielding no penicillin-resistant colonies. All 42 penicillin-sensitive and 53 of the 55 penicillin-resistant strains showed a sensitivity to streptomycin similar to that of the Oxford staphylococcus.

It is considered that the widespread use of penicillin causes resistance in staphylococci in two ways: either a strain acquires resistance to penicillin or naturally resistant organisms, originally few, may survive while sensitive organisms are destroyed. In the present study it was found that, as regards penicillin-sensitive strains, 4 patients had had previous treatment with penicillin but 37 strains came from patients who had had no previous penicillin treatment. In the case of resistant strains, 29 came from cases with previous treatment and 30 from cases without such treatment.


The authors investigated 195 cases of leptospirosis diagnosed serologically in their laboratories between 1940 and 1946. Any degree of agglutination of *Leptospira icterohaemorrhagiae* by blood serum they regarded as suspicious, but when a titre is 1 in 300 or less confirmation is sought.

Analysing the occupations of the patients they distinguished between bathers (5%) and those working in water (7%) on such work as bridge repairs, because in the latter infection through the conjunctiva and mouth seemed unlikely. Of the cases 95.6% were in males. The jaundice rate (90%) and the case-fatality rate (22%) were both high, possibly because all patients were those requiring admission to hospital. Evidence is adduced that many cases of leptospirosis escape recognition.


The authors report 4 cases of *Leptospira canicola* infection occurring in England. They point out that, though canicola fever has been reported in man from most European countries, hitherto only one case has been fully investigated in England. The disease is widespread among dogs all over the world. The 4 cases here detailed presented signs of meningitis with fever, a macular rash, and conjunctivitis. There were obvious changes in the cerebrospinal fluid. The diagnosis was obtained by demonstrating a high agglutination titre against *L. canicola* in the patients' plasma, and the evidence tabulated leaves no reasonable doubt about the correctness of this diagnosis. It is suggested that the possibility of leptospirosis infection should be considered in all cases presenting signs of lymphocytic meningitis.

Jos. B. Ellison.


Not all strains of *Salmonella typhi* are sensitive to phase Type II, and Archambault and the author found that the need for carrying out preliminary sensitivity tests on the infecting strain before propagating Type II bacteriophage, a process occupying some days, delayed the commencement of treatment unduly. To minimize this delay, a mixture of phases I to IV was prepared; *in vitro* this phage was found to attack all Vi forms of *S. typhi* and also to keep for long periods in the ice box. Theoretically, therefore, this mixture should serve for the treatment of all cases of typhoid, provided the infecting strains are in the Vi form.

The phage was used in the treatment of 20 cases of typhoid fever, the dosage and method of Knout et al. being followed. Reactions similar to those described by the same observers were noted: transitory rigor with some increase in pyrexia occurred some hours after injection and was followed by a rapid fall in temperature to subnormal but, within 24 to 48 hours, the temperature returned to normal and the "typhoid aspect" disappeared. Five patients were treated in the early septicaemic stage (presumably during the first week); their blood cultures, however, became negative "immediately" and no organisms were recovered from the dejecta. The results were variable among patients whose treatment commenced only when *S. typhi* had been isolated from the stools. More than half the cases responded in the same striking way as did the early cases, but the remainder required one or two additional doses of the polyphage "because of various complications." All of the patients recovered. The author concludes that intravenous injection of Vi-antityphoid bacteriophages yields good results during the early stage of the disease, and if given at a later stage affords effective protection in most cases, although the organism may be excreted for some time (3 women became carriers).


The effect of caronamide given by mouth 4-hourly for 3 days on the serum penicillin levels of 17 patients was studied. None of them was over 60 years old or showed evidence of impaired renal, cardiac, or hepatic function,
and all received 100,000 units of penicillin 4-hourly for 7 days. On the 2nd, 3rd, and 4th days caronamide was given 4-hourly, half an hour before meals. From 7 patients 4 g. and from 5 receiving 4 g., 1 g. of sodium bicarbonate in doses of 0.25 g. per 100 ml. was required. The values for copper in men varied from 85 to 162 μg. per 100 ml., with an average of 113 μg. per 100 ml., and in women from 89 to 152 μg. per 100 ml., with an average of 120 μg. per 100 ml. No correlation was found between copper and iron levels in any individual.

The values for iron in men varied from 80 to 177 μg. per 100 ml., with an average of 126 μg. per 120 ml., and in women from 54 to 163 μg. per 100 ml., with an average of 98 μg. per 100 ml. The values for copper in men varied from 85 to 162 μg. per 100 ml., with an average of 113 μg. per 100 ml., and in women from 89 to 152 μg. per 100 ml., with an average of 120 μg. per 100 ml. No correlation was found between copper and iron levels in any individual.


In normal female dogs, an oral dose of 0.5 g. of sodium salicylate every 3 hours was well tolerated. Serum salicylate content rose gradually to a level of about 60 mg. per 100 ml. after 2 days. When the blood level was stabilized, the dog received 1.6 g. of sodium citrate and 0.25 g. of sodium bicarbonate in addition to the regular dose of sodium salicylate. The serum salicylate level fell within the next 2 days to a final low value of 15 mg. per 100 ml. When the alkali administration was stopped the salicylate level began slowly to rise again. The urinary excretion of salicylate showed a significant increase with the administration of bicarbonate, and this increase was of a sufficient size to account for the decreased blood level.

The effect of alkali on the renal clearance of salicylate in 4 human subjects was similar to that observed in the dog. Sodium bicarbonate increased the salicylate clearance but the effect was not as striking as that in the dog, partly because there appeared to be more salicylate bound in the plasma protein in the human subject. The increase in clearance, as the pH of the urine increased, was due mainly to an increase in the excretion of unconjugated salicylate.

G. B. West.


On the basis of 160 tests on 57 patients it is shown that positive Paul–Bunnell reactions may be given by the sera of persons not suffering from infectious mononucleosis. Positive results were obtained in all of 6 cases of Hodgkin's disease, in 1 of 3 cases of granulocytosis, 2 of 2 cases of mononuclear leukemia, 1 of 3 cases of polycythemia, 5 of 8 cases of sarcoma other than Hodgkin's disease, and 19 of 29 cases of tuberculosis. The "diagnostic level" is taken as a positive result in a dilution of 1 in 56 or more. The tests on individual patients show considerable variation from time to time.

C. L. Oakley.


The authors show by in vitro experiments that streptomycin itself has a reducing action in the Hagedorn–Jensen method of estimating sugar in C.S.F., that this action is most marked in the more dilute solutions of the drug, and that estimations of sugar in C.S.F. therefore give unreliable results in cases treated with streptomycin.

S. S. B. Gilder.
HAEMATOLOGY


Eleven patients with P.A. in relapse have been treated with Vit. B_{12}, with responses comparable with those obtained by liver. The bone marrow became normoblastic within 48-72 hours of the beginning of therapy. The doses given varied from 1 μg–5 μg daily or 25 μg once a week. It is concluded that 1 μg is equivalent in potency to about 1 U.S.P. unit of liver extract.

L. J. Davis.


Oral and gastro-intestinal symptoms rapidly disappeared on treatment with Vit. B_{12}. Three patients with neurological complications showed remarkably good improvement.

L. J. Davis.


Evidence is presented which indicates that Vit. B_{12} when fed by mouth to patients with pernicious anaemia is more effective if neutralized normal gastric juice is fed at the same time. It is suggested that the extrinsic factor in food is identical or closely similar to Vit. B_{12}, and that the intrinsic factor in gastric juice is necessary for the proper assimilation of Vit. B_{12} or related substances present in food. Reference is made to the presence in the faeces of a patient with untreated P.A. of relatively large amounts of Vit. B_{12}. This is presumed to be synthesized by the intestinal bacteria.

L. J. Davis.


The authors set out their experience of haemolytic anaemia accompanied by haemoglobinuria. The cases belonged to 4 types: the Marchiafava-Micheli syndrome, those associated with cold agglutinins, those due to drugs, and an idiopathic variety. They consider the methods of investigation and stress the value of spectroscopy and the significance of haemosiderinuria. They believe splenectomy to be contraindicated and that blood transfusions are the most valuable form of therapy.


The case is recorded of a severe fatal haemolytic anaemia of unknown origin in a premature infant. Many of the red corpuscles contained inclusion bodies demonstrated by vital staining. They appeared to be similar in character to Heinz bodies which are known to be produced by poisons such as aniline and the sulphonamides, etc.

A. Pinev.


Saline extracts of spleens from patients with haemolytic anaemias and other disorders were tested for their power of sensitizing normal corpuscles to the agglutinating action of Coombs’ serum. Positive results were obtained with four spleens from patients with acquired haemolytic anaemia. It was also observed that blood from the spleens of patients with acquired haemolytic anaemia was more strongly agglutinated than was peripheral blood.

J. Maclean Smith.


Thirty out of a series of 63 babies with haemolytic disease of the newborn were treated by exchange transfusion. Only seven infants died after transfusion. This procedure is advocated when the cord haemoglobin level is less than 14.5 g. or when more than 4 mg. of bilirubin is present. The presence in the stained blood film of 10 or more nucleated red cells per 100 leucocytes is an additional indication.


The case history is described of a man with typical pernicious anaemia who was treated with folic acid. After a fairly satisfactory initial response he gradually became refractory to maintenance therapy and eventually his blood count continued to fall even when given 20 mg. folic acid daily. At this point he was given liver injections and rapidly responded.

Geoffrey McComas.


This method measures the amount of prothrombin not converted into thrombin during the coagulation of blood. Normally this only represents 10–20% of the total prothrombin, but in haemophilia a much higher proportion is left unconverted.

The test (time of the clotting of a standard fibrinogen solution by the patient’s serum in the presence of excess thromboplastin) is a more delicate indicator of a coagulation defect than the whole blood coagulation time and is useful in the diagnosis of haemophilia.

By performing the test on samples of serum obtained from venous and capillary blood (the latter contaminated with tissue thromboplastin) the effect of thrombocytopenia can be demonstrated. In this case the prothrombin content in the venous sample is considerably higher than in the capillary sample.

The authors describe the Lee and White method of measuring the rate of coagulation in vitro and discuss the various factors which will influence the results. A temperature of 37° C. is recommended.

Only in haemophilia are coagulation times regularly increased, although even here a normal range of coagulation may sometimes be met with. In other haemorrhagic disorders the coagulation times are usually normal (except in the rare condition a fibrinogenemia).

R. Winston Evans.


The authors describe how four patients have been treated by intravenous infusions of 100-180 ml. human plasma given 3-4 times a week. The beneficial effect on the coagulation time lasted for 24-72 hours. No resistance to transfusion developed and the clinical results were satisfactory. Alexander Brown.


The rare incidence is described of a haemophilia-like syndrome due apparently to the presence of a circulating anticoagulant. The patient's blood was found to have a pronounced anticoagulant effect on normal blood. Its own prolonged coagulation time could not be restored to normal by the addition of normal plasma as in haemophilia. Marjorie Le Vay.


The authors report three cases in which haemorrhagic diatheses appeared to be due to the presence of circulating anticoagulants. The anticoagulants appeared to inhibit an early phase in the coagulation process.


In previous experiments the authors have demonstrated that the platelet count in cats may be raised for a few days following "direct" blood transfusion. In man, however, the low platelet counts of two patients suffering from thrombocytopenic purpura were not raised when they were transfused by a similar technique. Douglas H. Collins.


No differences were found between the total megakaryocyte counts in marrow obtained by sternal puncture between the 36 patients with idiopathic thrombocytopenic purpura and 50 control patients suffering from various non-haemorrhagic disorders, and no constant relation was found between the megakaryocyte count in the cases of purpura and prognosis and response to splenectomy. However, differential counts showed that in purpura there was an unusual proportion of primitive megakaryocytes not engaged in forming platelets. This relative immaturity of the megakaryocytes was not significantly affected by splenectomy.

M. C. G. Israels.

The Bone Marrow on Sternal Aspiration in Multiple Myeloma. BAYRD, E. D. (1948). Blood, 3, 987.

A review of 51 cases examined by sternal puncture at the Mayo Clinic. The tumour plasma cells are believed to be derived from reticulum cells. Those cases in which the cells were most immature and variable in type terminated the quickest (mean survival 63 months). In contrast, seven patients in whom the plasma cells were of a mature uniform type survived 2-7 years. J. Maclean Smith.

Paroxysmal Cold Hemoglobinuria. BECKER, R. M. Arch. intern. Med., 81, 630.

In this paper are reviewed 37 cases of syphilitic paroxysmal haemoglobinuria. The characteristic features of this disease are contrasted with those of haemoglobinuria associated with cold agglutinins.


In this paper evidence is produced which is held to support the interesting but heterodox hypothesis that several erythrocytes may be derived in the bone marrow by budding off from the cytoplasm of a single erythroblast. A. K. Powell.


The author claims that the development of the antibodies in pregnancy is due to antigens in the placenta of the infant rather than in his corpuscles. Practically all the placentae of affected infants were found to have the power of absorbing Rh antibodies, but only about 10% of the placentae of unaffected Rh positive infants had this property. If it is assumed that about one-half of the mothers are capable of forming antibodies (as is suggested by the results of transfusion of Rh+ blood into Rh negative recipients), the 3% incidence of antibodies in Rh negative women bearing Rh positive children can be explained. J. J. van Loghem.

Adult Gaucher's Disease, with Special Reference to the Variations in its Clinical Course and the Value of Sternal Puncture as an Aid to Its Diagnosis. GROEN, J., and GARRER, A. H. Blood, 3, 1221.

The authors give the histories of nine personally studied cases of Gaucher's disease. They stress the frequency of bone pains due to skeletal involvement and the value of sternal puncture as an aid to early diagnosis. Cell types intermediate between reticulum cells and Gaucher cells may be found. Splenectomy does not alter the rate of progress of the disease.


The "L. E." cell of the bone marrow is a polymorph leucocyte which has engulfed a round homogeneous
Feulgen-positive mass. These cells were present in the bone marrow of four out of five patients with acute disseminated lupus erythematosus. E. Lipman Cohen.


Evidence is presented suggesting that ABO incompatibility may cause the death of the foetus at an early age.


A serum agglutinating all bloods containing O and A sub is described. It agglutinated O, O, and A, and aAB cells more strongly than A, A, and AB, or ABO cells. The authors believe their serum to be a pure anti-O serum and that bloods of Group O, A, A, and A, respectively are really O, AO, and AA in type. The fact that anti-A sera contain anti-A as well as anti-A fits in with this hypothesis. John Murray.


The D* genes, of which 12 different types have been recognized, are thought to have arisen as a series of graduated mutations from the D gene. Cells containing the D* gene are agglutinated by some anti-D sera, but not by all. They are, however, sensitized to the Coombs' test by the great majority of incomplete anti-D sera. The picture is a complicated one.


Sickling of certain red blood cells occurs when oxyhaemoglobin is changed to reduced haemoglobin. A mixture of ascorbic acid and sodium bisulphite or 2% sodium bisulphite alone may be used as reducing agents and sickling observed within 15-60 minutes when these reagents are added to susceptible blood. Zenker's fluid causes reversal to a discoidal form, but formalin preserves the sickled shape and is thus preferable for fixing post-mortem tissues. Douglas H. Collins.

MORBID ANATOMY AND HISTOLOGY


Transitional endometrium is that normally found in the late interval phase, that is, the phase between proliferation and secretion. The typical picture of this phase is found with striking frequency in routine histological examinations. The characteristic picture is as follows. The amount obtained by curettage is copious and the mucous membrane thick and almost hyperplastic. The stroma is loose and oedematous and highly vascularized. The epithelial cells are cylindrical with a central nucleus. The cells are vacuolated and the vacuoles contain glyco- gen. The lumen of the gland does not contain secretion. The appearance suggests that development of the endometrium has suddenly ceased. The picture is in its own way as characteristic as that of cystic hyperplasia. A study of the literature shows that these findings have been discussed several times but have never been systematically examined.

An analysis of 224 cases in which the typical picture was found is given. In many patients bleeding occurs from this type of transitional endometrium. Hormonal treatment was tried in some cases, but a normal secretory phase was rarely re-established. A few hormone analyses were made and these showed excess of gonadotrophic hormone but decreased output of oestrogenic hormone. Further and more extended hormone analysis is definitely required. Hormone imbalance is probably the basis of the condition but it is as yet impossible to say whether the imbalance arises primarily in the ovaries, the pituitary, or elsewhere. Josephine Barnes.


Thirteen cases of melanoma, occurring in children between the ages of 18 months and 12 years and therefore classified as malignant melanomas, were studied. Comparison was made with 50 cases of benign naevus of childhood, and with 17 melanomas occurring between the ages of 14 and 19 years. Histologically, in contrast to the benign naevi, the juvenile melanomata were pleomorphic. Half of them contained prominent giant cells, but except for this they were histologically malignant. All but 1 patient, however, remained alive and well for periods of up to 13 years after simple excision. The adult-type melanomata showed gross histological variation, but only 1 contained giant cells. Of these patients 71% were dead within 18 months. It is stated that substantiated cases of malignant behaviour of melanomata in childhood are few. There is a marked rise in the degree of malignancy after puberty although the tumours are histologically similar to those behaving benignly. A hormonal influence is postulated to account for this difference. Charles Pike.


The author presents cases illustrating four diseases: 1) Letterer-Siwe disease; (2) eosinophilic granuloma of bone; (3) infective reticulo-endotheliosis; (4) Hand-Schuller-Christian disease.

The examples described illustrate the difficulty of separating these conditions, and the author suggests a unifying classification as follows:

Histiocytic reticulosis (inflammatory): (1) Acute-Letterer-Siwe's disease, and rapidly progressive instances of eosinophilic granuloma of bone. (2) Subacute-, Eosinophilic granuloma of bone, with or without visceral lesions. (3) Chronic—slowly progressing histiocytic or lipogranomatous lesions of bone or viscera, and certain fibrous lesions. The majority of cases of Hand-Schuller-Christian disease would fall into this group.


The literature on development of sarcoma in irradiated bone is reviewed, the experimental production of bone sarcoma by irradiation in animals and the reported cases developing in human subjects being discussed. Eleven further cases are presented in detail; osteogenic sarcoma developed in irradiated bones 6 to 22 years after treatment of benign bone lesions or in normal bone after irradiation of another lesion. The average age was 34 years. The histologically confirmed cases included 2
giant-cell tumours, one bone cyst, and one ossifying fibroma; there was one case of sarcoma in the second rib following post-operative irradiation of the chest wall after mastectomy. Ten cases were treated by x-rays and one case by radon pack. Estimated tumour doses were generally over 3,000 r, though one bone cyst had received only 1,550 r. The most constant clinical sign of malignancy was the sudden onset of progressive pain; this sign, in an area treated by radiation 5 years or more previously, calls for immediate biopsy examination. The authors believe that recognition of this possibility will lead to discovery of more cases; they are consequently opposed to x-ray therapy for non-malignant tumours of bone, including giant-cell tumours.

J. Walter.


This is an account of 8 cases, varying from single eosinophil granuloma to well-marked Hand–Schüller–Christian disease, to illustrate the author's contention that these diseases are varying responses to a common unknown aetiological factor.


The author reports the case of a man, aged 29, who suffered from Boeck's disease affecting the hilar, cervical, and axillary lymph nodes for 4 years before death. The diagnosis of Boeck's disease was confirmed by lymph node biopsy examination. The disease took a benign course until suddenly, 4 years after it had been diagnosed, the patient developed a fatal tuberculous meningitis. Necropsy and histological examination revealed in several organs old and largely fibrotic granulomata like those in Boeck's disease. In addition, fresh typical miliary tubercles and changes representing a transition from the lesions of Boeck's disease to those of tuberculosis were found. On account of the histological findings and the clinical history the author considers this case to be one of transition of Boeck's disease into miliary tuberculosis.

Boeck's disease spreads by haematogenous dissemination and appears very similar to "chronic miliary tuberculosis." The case described is thought to support the theory of a tuberculous aetiology of Boeck's disease and the author considers the latter to be a special form of tuberculosis. He therefore proposes to call it "atypical tuberculosis, type Boeck." The prognosis of "atypical tuberculosis" is not always favourable, because of the possible transition into miliary tuberculosis.

R. Schade.


The histological structure of 65 carcinomata of the oesophago-gastric junction is reviewed. The authors conclude that the adenocanthomata and some papillary adenocarcinomata of this region may arise from the oesophageal glands, that other papillary adenocarcinomata arise from the gastric glands, and that in general adenocarcinomata of this region are better differentiated and less productive of metastases than those of other parts of the stomach.

R. A. Willis.


In these two papers the application of the smear-technique is discussed, and two large series of cases are analysed. Those interested should consult the original papers.


This is a discussion of the pathology of the spleen in 86 cases, in which the common factor is resistance or obstruction to the venous return. The cases are divided into three main groups: (a) where the obstruction is of post-hepatic origin, such as constrictive pericarditis and mitral stenosis; (b) hepatic cirrhosis of various types; and (c) pre-hepatic obstruction due to thrombosis of the portal or splenic vein, or of both. The differences in the spleen in the various groups are regarded as degrees of the same process, depending, first, on the duration of the hypertension, and, secondly, on the proximity to the spleen of the obstructing lesion; for instance, the changes are minor in constrictive pericarditis, but pronounced in the presence of an organized and recanalized thrombus in the splenic vein. As would be expected, a well-developed collateral circulation is present only when the hypertension is of long standing, and further lesions, such as siderotic nodules and myeloid metaplasia, are found only in similar circumstances.

W. S. Kilpack.


The authors carried out 165 liver biopsies on 130 patients suffering from various types of liver disease. The main histological features were statistically compared with the results of a series of liver function tests carried out within 2 days of the biopsy. Among the many results the following may be quoted. Diffuse liver-cell damage was found to be significantly correlated with cephalin–cholesterol flocculation, thymol turbidity, albumin–globulin ratio, and bromsulphalein retention, but not with total serum protein or with alkaline phosphatase. Focal necrosis and fatty change were not associated with any significant change in the liver function tests. Regeneration was correlated with increased thymol turbidity. (The original should be consulted for other results.) The authors are careful to point out that the statistical correlations disclosed do not prove that an abnormal function is necessarily caused by the associated pathological change.

Douglas H. Collins.


This paper presents the results of analysis of 120 cases of regional ileitis, with a review of the literature. Empha-
 sis is laid on macroscopical and microscopical morbid anatomical features, descriptions being given of acute, subacute, and chronic phases. The chronic phase—the most common—is dealt with in detail. Early changes, not previously described, were observed in the gut and lymph nodes. In the gut, between the lymph nodes and muscularis mucosae, there was observed focal proliferation of lymphatic endothelium, leading to obstruction and dilatation and oedema. Similar changes are seen later in the submucosa and subserosa; the endothelial cells coalesce to form giant cells; eosinophils and lymphocytes surround the endothelial masses. Similar changes occur in mesenteric lymph nodes and vessels. Ulceration does not appear until oedema is considerable; the resulting non-specific inflammatory changes often overshadow the early granulomata. Differential diagnosis is seldom a problem but may be difficult. The aetiology remains unknown. As regards pathogenesis, lymphatic blockade is considered of fundamental significance.

R. R. Wilson.


This account of the morbid histology of infectious mononucleosis, based on 9 necropsies and numerous biopsies, describes the characteristic hyperplasia of the lymphoid tissues. The spleen, which was invariably enlarged at the height of the disease, was packed with lymphoid cells. Splenic follicles and trabeculae were rendered less prominent than usual, and spontaneous rupture had occurred in 4 cases. The bone-marrow contained no abnormal cellular infiltration. Small aggregations of lymphocytes were found in the myocardium. In one case a pneumonic exudate in the lungs consisted of lymphoid cells. Periportal infiltrations of lymphocytes were sometimes excessive in the liver. In 4 out of 6 brains examined a mild or moderate meningoencephalitis was observed, and in 2 cases there was a distinct peripheral neuritis. Douglas H. Collins.


The series investigated suggests that thyroid function is initiated in the foetus at 14.5 weeks.


The author has studied 20 new cases of congenital cystic disease of the lung, and summarizes his findings as follows. Congenital cysts of the lung occur either as solitary large cysts or as multitudinous, smaller cysts. They have been found in foetuses, and at all ages. In most cases they contain air, though occasionally they are filled with a gelatinous substance. Histological examination of a typical case will reveal an epithelial-lining of columnar cells, bordered by a basement membrane, while the underlying tissues consist of fibrous and smooth muscle tissue and elastic fibres. Cartilage and mucous glands may be present. Noteworthy features are the frequent absence of alveoli in the immediate neighborhood, and the absence of carbon deposits, those parts of the lungs appearing pink and fleshy. The author interprets his findings as indicating an arrest of normal development of the bronchi. Other co-existent congenital abnormalities lend support to this assumption.

R. Salm.


The post-mortem appearances in 6 cases of tuberculous meningitis treated with streptomycin are described. In 4 the primary focus was still alive. In one activity was arrested, while in another the focus was not found and may have regressed. In all cases there were visceral tubercles which had undergone hyaline change, some being completely hyalinized. Other tubercles showed activity, but there were no histiocytic abscesses as described by Wriley. Do be in spite of treatment was due to a continuation of the meningitic process. Attention is drawn to the hyalinization of splenic arterioles (a condition normal in older subjects but not in childhood).

D. M. Pryce.


The histological lesions in 3 forms of encephalomyelitis, the epidemic encephalitis of von Economo, Japanese (Type B) epidemic encephalomyelitis, and anterior poliomyelitis, are compared. In these three conditions the nerve cells of the grey matter are primarily attacked and the white matter is left relatively intact. The differences in distribution are described in detail.


A 23-year-old married woman complained of vague abdominal pain of 3 months' duration. On examination, the Wassermann reaction was strongly positive. In another case a 23-year-old woman was presented with a 1 cm. mobile, gelatinous tumour, which was found to be a chorioangiobroma.

Bipsioides of skeletal muscle from 56 cases of rheumatoid arthritis have shown focal round-celled (mainly lymphocytic) infiltration in the endomysium and perivascular tissues in 60.7% of cases. Similar changes were found in 1 of 3 examples of Still's disease. Negative results were obtained in a variety of other forms of arthritis.


The paper records an unusually large angioma of the placenta, 8 cm. in main diameter, the edge of which presented along with the child's head and caused serious haemorrhage during the second and third stages of labour. The five photomicrographs show clearly the capillary angiomatous structure of the tumour, to which the author applies the name "chorioangiobroma" used by Siddall in his review of 130 reported tumours of this kind (Amer. J. Obstet. Gynec., 1924, 8, 554).

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