
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


A continuation of the studies on the use of chloramphenicol ("chloromycetin") in the treatment of patients with typhoid fever indicates that the synthetic form of the drug is as efficacious as the natural antibiotic obtained by the fermentation process from Streptomyces venezuelae. The same total amounts of either type drug are equally effective when given in divided doses at 2- to 6-hour intervals or in larger doses once or twice daily.

There was a definite relationship between the duration of chloramphenicol treatment and the occurrence of relapses in typhoid fever. Slightly more than half of the patients who were treated for 8 days or less had a recrudescence of the disease which began about 10 days after treatment was stopped. No relapses occurred in the groups of patients treated for longer periods of time. The present data suggest that a 14-day period of treatment is sufficient to prevent relapses. In spite of the dramatic therapeutic effectiveness in patients with typhoid fever, serious complications such as intestinal haemorrhage and perforation may be expected in treated patients since the stage is generally set for such developments before therapy is instituted and time is required for the healing of the typhoidal lesion of the intestine. In the present group of 23 patients, 2 had haemorrhage sufficiently severe to produce shock. Two other patients suffered intestinal perforation; the course in one of these was further complicated by severe haemorrhage and the disease terminated fatally. Neither of the patients with perforation was given surgical treatment; chloramphenicol therapy controlled or suppressed the usual signs of generalized peritonitis.

On the basis of the present observations, it would appear that the adequate treatment of typhoid fever in the adult consists of an initial oral dose of 3.0 to 4.0 g. of chloramphenicol, followed by 1.5-g. oral doses given every 12 hours during the febrile period and by single daily 1.5-g. doses for 7 days; thereafter the dose may be reduced to a single 1.0-g. dose and continued until the 14th day of antibiotic therapy, after which the drug may be discontinued. Particular attention should be given to the recognition of intestinal perforation in treated patients, since the classical signs of this development with the ensuing generalized peritonitis may be partially masked by the antibacterial effect of chloramphenicol.—[Authors’ summary.]


Using 0.05 ml. of a 10⁻² dilution of 18-hour cultures as inocula, the authors compared the effects of chloramphenicol (in brain-heart infusion) in vitro with those of
aureomycin (in thioglycollate broth). Chloramphenicol was assayed in the brain-heart infusion medium, with a strain of Klebsiella pneumoniae (sensitive to 0.4 μg. per ml.) as test organism. With 8 strains of Gram-positive organisms, aureomycin was some 30 to 100 times more active and with 8 strains of Gram-negative organisms (except for Proteus vulgaris) some 5 times more active than chloramphenicol.

Single oral doses of 1 g. chloramphenicol gave maximum levels in blood in 1 hour (10 μg. per ml.) and the antibiotic had disappeared in 24 hours. With 1 g. 8-hourly, a mean level of 4 to 10 μg. per ml. in blood was attained. Urinary excretion was also very rapid, 80% being excreted in 4 hours, and excretion was complete in 8 to 12 hours. Conjugation starts rapidly and the antibiotic is largely excreted in the urine in the inactive form. Thus chloramphenicol is absorbed and excreted more rapidly than aureomycin, and the optimum interval between oral doses should be 4 hours. Malcolm Woodbine.

A Case of Brill's Disease in London.

The history of Brill's disease is given.

The present authors describe the case of a woman aged 49 who developed a febrile illness, with headache and pains in the limbs, which was treated with sulphadimidine ("sulphamethazine") without effect. The symptoms had not changed by the 8th day of illness, when the patient was admitted to hospital. The temperature was then 102° F. (38.9° C.) and there was suffusion of the conjunctivae, but no rash was present and the spleen was not palpable. Her temperature began to fall after admission to hospital and was normal after 8 days. The patient was born in Poland and had typhus there in 1915; she migrated to Berlin in 1919, and to London in 1939. A tentative diagnosis of Brill's disease was made and investigations (blood count, blood culture, faeces culture, agglutination tests, etc.) were undertaken. All were negative except the Weil–Felix tests, in which an agglutination titre of 1 in 700 to Proteus OX19 antigens was obtained on the 16th day of illness, subsequently falling rapidly. Samples of serum were sent for further investigation to Felix, whose opinion was that the marked drop in the OX19 titre was to be accepted as confirming the clinical diagnosis. Specimens of serum were also sent to Washington for rickettsial agglutination and complement-fixation tests, the reactions being reported as "definitely epidemic in type and . . . consistent with a diagnosis of Brill's disease."

A Note on a Case of Brill's Disease in London.

Apart from one case reported by Mooser and Loeffler in 1946 in Zurich, all the reported cases of Brill's disease have occurred in the coastal towns of the northeastern United States. Although the majority of cases have been in Jewish immigrants from eastern Europe, the incidence is not limited to any racial group. It seems likely that the disease will occasionally be seen in any country whose population includes an appreciable proportion of persons previously exposed to louse-borne typhus.

The clinical diagnosis of Brill's disease is not easy, as the disease is always sporadic and the clinical course milder than in the primary attack of louse-borne typhus. In the present case the patient did not even develop a rash, which is the most helpful of the few diagnostic signs. Laboratory tests are indispensable for diagnosis, and, although agglutination and complement-fixation tests became available recently and are valuable in differentiating the varieties of typhus, the case under review shows clearly that, it was possible to confirm the diagnosis by the use of the Proteus OX19 reaction; incidentally, it became positive at an earlier stage than the rickettsial agglutination test.

It is important, however, that the Weil–Felix test be standardized by international agreement. The customary use of Dreyer's technique is unsatisfactory because of the heat-lability of O agglutinins. The proper technique entails the use of round-bottomed
How great is the need for R. Soc. agglutination titre in Brill's disease is shown to be unsatisfactory, dilutions as low as 1 in 10 being used. In the London case the tests carried out in two laboratories showed a fourfold difference in titre.

From the epidemiological point of view Brill's disease is of interest as a possible source of dissemination of louse-borne typhus, and, in view of the widespread epidemics of this form of typhus during the last war and the subsequent movement of large groups of people from one country to another, the disease may come into prominence in many parts of the world.

J. V. Armstrong.

BIOCHEMISTRY


Electrophoretic analysis of sera in 24 cases of myelomatosis revealed a significant decrease in \( \gamma \)-globulin mobility compared with eight normal sera. In 23 cases of hepatic disease, tuberculosis, or malignant disease, there was no change. Electrophoretically homogeneous \( \gamma \) globulin was prepared in eight cases of myelomatosis, by methanol precipitation of the sera at \( pH \) 6.8, in the cold. Extinction coefficients, at 280 m\( \mu \), and \( pH \) 2 and \( >12 \), differed widely, lying above and below the normal. These results support the hypothesis of the heterogeneity of the \( \gamma \) globulins. In the electrophoretic patterns, the peaks of myeloma \( \gamma \) globulin were steeper and narrower than corresponding peaks in other diseases. The authors consider the shape of the peak to indicate the degree of heterogeneity of the \( \gamma \) globulins, the ratio of height to width of base (Q) decreasing with increasing heterogeneity.

Out of 800 sera analysed by electrophoresis, 200 had a raised \( \gamma \)-globulin content, that is, this globulin formed more than 20% of the total protein (normal = 14 to 18%). In each case, the diagnosis and the figures for protein and Q are recorded. In 150 cases the cadmium sulphate turbidity test and Weltmann calcium-chloride heat-coagulation test were performed.

In myelomatosis, \( \gamma \) globulin forms about 40% of the total protein, the amount of the latter being also raised. The cadmium reaction is positive and there is a marked shift to the right in the Weltmann reaction. The empirical protein reactions are strongly positive. The erythrocyte sedimentation rate is typically raised and Q is increased, this change being almost pathognomonic.

In malignant disease all three globulin fractions increase, but there is a subnormal or low value for total protein. The cadmium reaction is positive and there is a shift to the left in the Weltmann test.

In alcoholic cirrhosis of the liver the amount of \( \gamma \) globulin is moderately increased while those of \( \alpha \) and \( \beta \) globulin are slightly raised. The cadmium reaction is positive and the Weltmann test shows a widened range of coagulation. In acute infections \( \alpha \) globulin increases in amount as well at \( \gamma \) globulin. In chronic infections the results are variable.

M. Lubran.


In 38 consecutive surgical cases involving major operation (including 15 on the gastro-intestinal or biliary tracts) and five involving minor operation, complete analyses of the blood, urine, and gastric return were made at frequent intervals: whenever possible, the plasma potassium
concentration was determined 24 hours and 1½ hours before operation, immediately after operation, and then 24-hourly until a normal level was reached and every 48 to 72 hours thereafter during the remainder of the patient's stay in hospital. The clinical management of the patient was not altered in any way and parenteral fluids were given in accordance with the usual routine; potassium therapy was not given unless it was considered essential [presumably on biochemical as well as on clinical grounds].

A plasma potassium level below 3.8 mEq. per litre was found [at one or more readings?] in 26 cases. The levels at different intervals were extremely variable, sometimes fluctuating widely between one estimation and the next. Of 26 cases in which the immediate pre-operative and post-operative plasma potassium levels were determined, in 13 there was a rise after operation, and in 13 a fall. The lowest average reading in the 38 major surgical cases was 3.25 mEq. per litre, and the highest 4.97 mEq. per litre. [Presumably these averages refer to the complete period of study for each patient.] It is apparent, therefore, that any conclusions drawn from the average plasma potassium values in the different periods studied would have no value. Urine volume and urinary excretion of potassium also tended to vary rather widely; the urinary excretion rates for water were higher, and for potassium were lower, than those reported by other workers. The nearest approach to a set pattern of reduction in plasma potassium values associated with a rise in urinary excretion of potassium was exhibited by the six patients who had undergone cholecystectomy. Potassium therapy had been considered essential (and had been given) in seven of the 26 cases in which hypopotassemia was found; the clinical and biochemical findings indicated that it could have been given with advantage in 11 other cases. Clinical notes with graphs are given of some typical cases, including three in which potassium therapy could be regarded as life-saving. The series included many elderly patients and a number of poor operative risks; infusion therapy could not be considered a factor in the three deaths which occurred.

In a series of cases in which plasma potassium values were determined less frequently, levels below 3.8 mEq. per litre were found in 9 of 30 patients undergoing operations on the biliary tract, and in 8 of 42 other surgical patients. In all, 100 major surgical cases were studied. It is concluded that "studies on surgical patients have clearly demonstrated the necessity for a knowledge of plasma potassium levels in the management of complicated surgical cases."

[The authors of this important paper could have been more informative. How many of the patients, for instance, showed one or more plasma potassium levels below, say, 2.3 mEq. per litre in the immediate post-operative period?]

Joseph Parness.

The Effect of Diethylstilbestrol on the Calcium, Phosphorus and Nitrogen Metabolism of Prostatic Carcinoma.


The metabolism of a patient with diffuse osseous metastases from a carcinoma of the prostate was studied before and during four months' oestrogen therapy at the Montefiore Hospital, New York. Urinary and faecal excretion of calcium, abnormally high before, decreased during therapy, and the calcium balance changed from negative to positive. The serum acid-phosphatase level fell markedly; the serum alkaline-phosphatase level rose slightly. Nitrogen and phosphorus metabolism was little affected. The theoretical phosphorus balance, based on a nitrogen/phosphorus ratio of 15:1 and a calcium/phosphorus ratio of 2.2:1, was calculated. Throughout the period there was retention of phosphorus, unaccountable theoretically, which was less after treatment that before.

P. Mestitz.
**ABSTRACTS**


Working at the Montefiore Hospital, New York, the authors of this paper have studied a series of 71 patients with osteolytic bone metastases from cancer of the breast. In 10 of these they observed a syndrome, consisting of gastro-intestinal disturbances, mental changes, and renal insufficiency, which was associated with hypercalcemia. In these 10 cases the serum calcium content ranged from 12.3 to 20 mg. per 100 ml., whereas the serum inorganic-phosphorus and alkaline-phosphatase levels did not consistently vary from normal. The patients frequently showed evidence of dehydration, and an elevated blood urea-nitrogen level and impaired renal clearance were found in all cases. The authors believe actual bone destruction by the tumour to be the most important factor in the development of the hypercalcemia, but they discuss other factors, including immobilization and renal insufficiency, which they regard as contributing factors.

Treatment took the form of restriction of calcium intake and improvement of hydration by the parenteral administration of fluids, with sodium citrate in some cases, to facilitate calcium excretion. Although the ultimate prognosis was not affected, response to treatment is described as frequently dramatic, and was associated with the return of serum calcium content and blood urea level to normal.

*H. A. Sissons.*


The osmotic stability of the body fluid is maintained by keeping the serum sodium level constant. This level is kept constant by a renal excretion of sodium which effectively compensates for changes in the sodium intake and in the amount of sodium lost by sweating. It has hitherto been believed that the amount of renal excretion is influenced by serum sodium level and the glomerular filtration rate (GFR), which in turn depends on the sodium load presented to the kidney for excretion. The authors, by studying the excretion of sodium and other substances like chloride, bicarbonate, potassium, urea, sulphate, and phosphate in normal and salt-depleted subjects, were unable to confirm this hypothesis. They found that, in all subjects, increase in the sodium load which directly affects the GFR did not lead to increase in sodium excretion even after the serum sodium level and inulin clearance had been raised to normal figures or figures above normal. This means that sodium reabsorption occurs in the tubules which must, therefore, play a significant part in determining the amount of sodium excretion. The authors found that in salt-depleted subjects sodium reabsorption was not only greater but also more prolonged, and was maintained for a few days. They therefore believe that the slowness with which the readjustment to normality takes place suggests that a hormonal mechanism may be concerned, and that there may be an overproduction of adrenal cortical hormones during salt depletion. [Full experimental plan and methods are given and the results are well tabulated.]

*S. Karani.*

**HAEMATOLOGY**


The whole literature relating to the coincidence of polycythaemia vera and leukaemia is critically reviewed, but only 30 cases out of the 83 reported in the literature are accepted by the authors as adequately proved. In 25 of these 30
cases irradiation treatment had been given for polycythaemia before leukaemia became manifest, in three others such treatment may have been given, and in another the leukaemia developed at the time of starting radiotherapy. In only one case of polycythaemia did leukaemia undoubtedly develop without any previous irradiation.

The type of leukaemia which develops in cases of polycythaemia after x-ray therapy may be either of the acute or of the chronic granulocytic type, whereas in all those cases recently reported of leukaemia following treatment of polycythaemia with radioactive phosphorus were of the acute granulocytic type. The authors regard the evidence of a causative relationship between irradiation and the development of leukaemia as proven.

A. Piney.

Microscopic and Histochemical Studies on the Auer Bodies in Leukemic Cells.

Auer bodies were found in the abnormal leucocytes in 16 cases of acute monocytic leukaemia and four cases of acute myelogenous leukaemia out of a total of 185 cases of acute leukaemia occurring in the haematological clinic at Ohio State University during a period of 3½ years. Histochemical studies were made on blood specimens from seven of the cases of monocytic and three of the cases of myelogenous leukaemia, the method including the examination of supravital preparations both by direct and phase contrast microscopy. The staining properties of the Auer bodies are described. It is suggested that they are formed by the fusion of newly formed "normal" cytoplasmic granules which take place in young cells in which the granules are of a relatively acid pH. P. C. Reynell.


Twelve cases of myeloid hyperplasia seen within a period of 18 months are described. In two cases the condition occurred as the terminal stage of polycythaemia and in three cases as a result of carcinoma with skeletal metastases; two cases were associated with tuberculosis, one case was due to sclerosis of the bone marrow, and four appeared to be "primary." The clinical and haematological features correspond well with those already described in the literature. The bone-marrow findings were variable; only in one case was myelosclerosis generalized, but in six of them one sternal puncture failed to produce enough cells to make adequate smears. In the hyperplastic marrow the erythroblast was the dominant cell, in marked contrast to the findings in leukaemia. The importance of hepatic and splenic biopsy examination in diagnosis is stressed. Extramedullary haematoipoiesis was demonstrated by these methods in every case in which they were carried out. The differential diagnosis from leukaemia is discussed in detail. [This is a lucid review of a subject which often causes difficulty.] P. C. Reynell.

Nine Blood-group Antibodies in a Single Serum after Multiple Transfusions.

A Connecticut woman aged 40 years had two pregnancies, the first ending in toxæmia and premature stillbirth, and the second in normal delivery. At this time splenomegaly was noted, which was said by the patient to have been present for 12 years. No abnormality was found on examination of the blood on three occasions. Four years later splenectomy was performed, the spleen weighing 1,100 g., after which anaæmia developed and two blood transfusions were given. During the next 12 years the patient was given a further 18 transfusions for anaæmia due to osteosclerosis, and on four occasions developed a transfusion reaction. On examination of the patient's serum, nine blood-group antibodies were found, as shown in the following table:
ABO .. 0
MNS ..
Rh ..
Kell
Lewis*
P ..
Lutheran*

<table>
<thead>
<tr>
<th>System</th>
<th>Pheno-type</th>
<th>Genotype</th>
<th>Antibodies in the Serum</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABO</td>
<td>O</td>
<td>OO</td>
<td>Anti-A and anti-B</td>
</tr>
<tr>
<td>MNS</td>
<td>MsMs</td>
<td>MsMs</td>
<td>Anti-N and anti-S</td>
</tr>
<tr>
<td>Rh</td>
<td>CDe/cDe</td>
<td>CDe/cDe</td>
<td>Anti-E and anti-Ce</td>
</tr>
<tr>
<td>Kell</td>
<td>kk</td>
<td>Anti-K</td>
<td></td>
</tr>
<tr>
<td>Lewis*</td>
<td>Le(a-b-)</td>
<td>?Le/nLe</td>
<td>Anti-Le and anti-Leb</td>
</tr>
<tr>
<td>P</td>
<td>P-</td>
<td>pp</td>
<td></td>
</tr>
<tr>
<td>Lutheran*</td>
<td>Lu(a-)</td>
<td>LuLub</td>
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Of these antibodies, those to E, K*, C, Le*, and S were probably immune in origin and the remainder naturally occurring. It is surprising that among this wealth of antibodies, five of which are very rare, no anti-P was found, since the patient lacked the antigen P and she must surely have received some P+ blood.

John Murray.


A woman of 64 received transfusions of blood from 24 donors “compatible” in respect of A, B, O, and D blood antigens, as a result of which she developed antibodies to E, M, and P. The authors state that routine methods of cross-matching are inadequate to detect the rarer antibodies, and that special techniques should be employed in cases of repeated transfusion. They suggest that a search for rare antibodies in the sera of patients who have been repeatedly transfused with so-called compatible blood will reveal that these antibodies are of much more frequent occurrence than is generally believed.

John Murray.


The authors describe the occurrence of severe haemolytic reactions in three group-A (sub-group A1) individuals on transfusion with group-O whole blood or plasma. In one case 10 ml. of a commercial preparation of soluble A and B factors had been added to 500 ml. of whole blood before transfusion. The anti-A antibodies demonstrated in the donors’ serum fixed complement, acted as haemolysins, were difficult to neutralize with soluble A and B factors, and were capable of giving a positive reaction to Coombs test, while their ability to agglutinate group-A erythrocytes was enhanced by normal human serum. In other words, they had the characteristics of antibodies observed in serum from donors known to have been actively immunized against the A factor by previous transfusion of group-A erythrocytes, by transfusion of A factor, or by pregnancy. A history of such a stimulus was, however, lacking in the case of these donors. Small amounts of immune A antibody were consistently demonstrated in 12 of 100 random samples of group-O serum which, after neutralization, gave indirect positive Coombs tests with A1 erythrocytes and agglutinated A1 erythrocytes suspended in compatible normal human serum.

The authors conclude that there is no longer any justification for regarding group-O blood as universally safe for transfusion purposes. They stress that, while outward clinical manifestations of a haemolytic reaction may be slight, the laboratory findings may be dramatic. The addition of group-A and group-B substance is not at present sufficient to render all group-O blood safe, and they suggest that all group-O blood should be screened. Many dangerous donors would be eliminated if their serum, diluted 1 in 50, 1 in 100, or 1 in 200 with saline, were tested with a saline suspension of group-A and group-B erythrocytes. If group-O plasma which in such dilution failed to agglutinate erythrocytes of either group were neutralized with soluble A and B factors, some reduction in hazard would be achieved. Tests of neutralized serum against group-A and group-B erythrocytes suspended in the recipient’s own serum would serve as an additional precaution in selected cases, especially those receiving multiple transfusions from universal donors.

Janet Vaughan.

The authors suggest that alterations in the blood coagulation mechanism may be associated with premature separation of the placenta, and investigations on three severe cases of this condition are described.

In the first case described the blood components were normal one week before separation of the placenta. Three hours after separation, and without rupture of the membranes, the fibrinogen plasma and prothrombin levels were 50% of normal and there was evidence of a circulating fibrinolysin. The blood findings were normal again three days after delivery. In the second case the plasma fibrinogen value four hours after placental separation was one-third of normal. There was a spontaneous increase 20 hours after rupture of the membranes, and a further increase due to blood transfusion at delivery. The prothrombin activity, which was 80% after the onset of symptoms, fell to 30% at delivery, but also improved with transfusion. A circulating fibrinolysin was present before artificial rupture of the membranes. In the third case the coagulation mechanism was normal four hours after placental separation. Two hours later, in spite of transfusion, fibrinogen was absent, prothrombin activity was diminished, and a circulating fibrinolysin was present. There was persistent bleeding after delivery, with no sign of clotting. A total of 2,400 mg. of fibrinogen was given intravenously in solution over a period of half an hour, and bleeding ceased. The blood fibrinogen level had risen by then to 187 mg. per 100 ml.

The authors believe that the changes in the coagulation mechanism follow rather than precede premature separation of the placenta. In 15 other patients, apparently bleeding from a partial separation of placenta, the coagulation mechanism was normal. It is felt that there is a need for a rapid test which will detect a critical reduction in blood fibrinogen concentration, and observation of the size and stability of the clot in a sample of incubated venous blood is suggested as a suitable test. Transfusion of 1,500 ml. of blood, with the addition of 2,000 to 6,000 mg. of fibrinogen, is an important part of treatment when clot stability is inadequate. \textit{Margaret C. S. Binnie.}

Investigations on the Role of Plasma Cells as Antibody Producers. \textsc{[In English.]} \textsc{Gormsen}, H. (1950). 	extit{Sang}, 21, 483.

The existing evidence for the globulin-forming function of plasma cells is briefly indicated. In a study of sternal marrow from 800 patients with diseases other than multiple myelomatisis the author found that a plasma cell count of more than 5% was invariably accompanied by hyperglobulinaemia. In patients with a serum globulin level of more than 3.5 g. per 100 ml. the converse was almost always true. Earlier work showed that rabbits hyperimmunized with polyvalent pneumococcal vaccine responded with an intense generalized plasma-cell proliferation. The antibody content of tissue extracts was related to the number of plasma cells in the tissue. “Stilbamidine,” although producing specific myeloma cell inclusions in patients with myelomatosis, did not apparently interfere with antibody formation in experimental animals. \textit{M. McC. Giles.}

\textbf{MORBID ANATOMY AND HISTOLOGY}


Among 1,493 cases of primary carcinoma of the lung observed at the Memorial Hospital, New York, over a period of 24 years, 25 cases (1.6\%) of multiple primaries were encountered, two tumours being present in all but one case, in which there were three. In 7 cases the tumours had different histolo-
gical appearances (positive evidence); in 13 the tumours had similar histological appearances, but on clinical grounds it was unlikely that either was a metastasis from the other (probable evidence); and in 5 cases the lung lesion was associated with a basal-cell carcinoma of the skin. The oral cavity (7), skin (5), and larynx (4) were the most frequent sites of the second tumour. In 15 instances diagnosis of the 2 lesions was made within 6 months of each other, and in 10 cases the second lesion was diagnosed more than 6 months after the first.


This is a well-illustrated review of the subject of adenolymphoma, the view being supported that this tumour arises from parotid ducts, and that it and "oxyphilic granular cell adenoma are related neoplasms that differ only in pattern and supporting stromal elements." Adenolymphomata fall into two histogenetic groups: (1) those which arise from parotid ducts included in lymph nodes; (2) those which arise in the parotid gland itself and are accompanied by an inflammatory aggregation of lymphoid tissue. The close proximity of the lower part of the parotid gland to the submandibular gland probably accounts for the supposed origin of some adenolymphomata from the latter. [A full bibliography adds to the value of this useful paper.] R. A. Willis.


Amyloid material, giving characteristic reactions with methyl violet, methyl green, van Gieson, and Congo red stains, was found in 14 out of 66 personally studied cases of plasma-cell tumours. In 2 of the cases intracytoplasmic inclusions, staining weakly for amyloid, were present in the larger tumour cells. It is suggested that the presence of amyloid within a tumour of debatable nature is almost diagnostic of myeloma; it is also thought that plasma cells produce amyloid or some precursor of the latter. Necropsy findings in 2 cases of myelomatosis are also described; in one there were widespread amyloid deposits, in the other local deposits only.

A. Wynn Williams.


A comparative survey of 20 cases of angiosarcoma and 36 cases of Kaposi's sarcoma is presented. An attempt has been made to clarify the confusion existing in the study of malignant blood-vessel tumours. Definite predilections in race, sex, and anatomical onset were noted in Kaposi's sarcoma. The condition is bizarre or fulminating in females. Similar predilections were noted in the patients with angiosarcoma.

Trauma appears to be directly involved in the development of angiosarcoma in 3 of the patients described and was suspected in 2 patients with angiosarcoma of the breast. Angiosarcoma has been observed to develop from irradiated benign angiomata in 3 patients after long intervals. Treatment is fully discussed.

Two cases are added to the recent literature describing a new disease entity in which lymphangiosarcoma originates in the massive arms of women with post-mastectomy lymphoedema.


The authors discuss 14 cases of sclerosing lipgranuloma, taken from the files of the Armed Forces Institute of Pathology, Washington. They assign the term sclerosing lipgranuloma to those cases characterized by tumour-like swelling of subcutaneous fat after trauma of any kind, with basic pathological similarities and not already classified as
recognized clinical entities. Detailed histological appearances are given and comparisons drawn between these lesions and the ones found in allied conditions such as fat necrosis of the breast, Weber-Christian disease, and lipoid pneumonia. The theories of aetiology and pathogenesis of sclerosing lipogranuloma and allied lesions are reviewed. No definite conclusions are reached, but it is suggested that the lipogranulomatous reaction represents a specific process which follows its own course and has distinct clinical and pathological significance.

A. Ackroyd.


The author describes 2 cases of dysgerminoma ovarii in young girls, one associated with local infiltration and distant metastasis, and the other with myeloid leukaemia. Both cases were fatal, in spite of adequate surgery in the second case. The first case was of pathological interest inasmuch as there was no lymphocytic infiltration of the tumour stroma [Novak (Gynaecological and Obstetrical Pathology, 2nd ed.) states that this is a constant feature of the tumour]. The tumour in the second case showed assorted embryonic tissues, of which dysgerminoma was only one of the features.

The author reviews the literature of dysgerminoma ovarii and describes the pathological features of both teratoma and leukaemia. He suggests the possibility of a common origin of teratoma, leukaemia, and dysgerminoma from an undifferentiated mesenchymal cell, a hypothesis which the second case seems to support.

M. Halden Lloyd.


In the early stages of poliomyelitis the muscles showed an irregularity in staining associated with a granular fatty degeneration of many fibres. Longitudinal fibrillation and sometimes necrosis were seen. Later many fibres showed atrophic shrinkage (?) disease atrophy) and some hypertrophy. Proliferation of sarcolemmal nuclei and formation of muscle giant cells were sometimes conspicuous, but definite evidence of regeneration was absent. In all stages the histological appearances were characteristically pleomorphic. Changes in the nerves (which were obvious by the third day) were less severe than those in muscle, but it seemed that the degree of damage in the muscles and anterior horn cells ran parallel. The muscle changes, however, differed from those of simple central paralysis, and may possibly be due to a direct action of the virus.

D. M. Pryce.


A histological and histochemical examination of 6 specimens of granular-cell "myoblastoma" is described, and the three hypotheses concerning the origin of these lesions—whether from muscle cells, histiocytes, or Schwann cells—are rejected. The granules in the cells are found to stain similarly to granules in fibroblasts. It is suggested that the growths are lipoid-containing granular-cell fibroblastomata.

R. A. Willis.


Their histological study of specimens taken from 7 cases of villous synovitis and from 34 cases of giant-celled tumour of tendon sheath satisfies the authors [but not the abstractor] that the latter is a non-neoplastic "proliferative response to chronic inflammation." A similar conclusion regarding the pigmented "histiocytoma" or "sclerosing angioma" of the skin is based on a study of 37 of these lesions.

R. A. Willis.