ABSTRACTS

This section of the ANNALS is published in collaboration with the two abstracting Journals, ABSTRACTS OF WORLD MEDICINE and OPHTHALMIC LITERATURE, published by the British Medical Association.

The abstracts selected for this Journal are divided into the following sections:

**Acute Rheumatism**

At the Irvington House Prophylaxis Research Clinic, New York, a controlled comparative trial of the prophylactic merits of sulphadiazine (given orally in a dosage of 1 g. daily) and of the potassium salt of benzylpenicillin (given orally in a dosage of 200,000 units twice daily) was carried out over a period of 3 years on 153 patients who had had a previous attack of rheumatic fever (meeting the Duckett-Jones criteria) within 27 months and who were less than fourteen years of age. Patients were allocated at random to the two treatment groups and were followed up at monthly intervals.

In the penicillin-treated group the attack rate for all streptococcal infections was 20 per cent. (that is, twenty attacks in 100 patient-years) compared with 22 per cent. in the sulphadiazine-treated group. A rise in streptococcal antibody titre was seen in almost all these cases (19 per cent. of both groups), but recurrences of rheumatic fever occurred in only 4 per cent. and 3 per cent. respectively. Thus there was no difference in the results of the two treatment regimens; indeed the results did not differ from those of a study previously conducted on a comparable but individually different group in which the effects of 200,000 units of benzylpenicillin given orally once a day were compared with those of sulphadiazine given in a daily dosage of 1 g. The authors suggest that the advantages of monthly injections of benzathine penicillin in preventing streptococcal infection shown by previous trials might be due not to the low “prophylactic” blood level of penicillin throughout the month, but to the routine monthly eradication of streptococci. A trial is currently being carried out in which the effects of benzathine penicillin injections are being compared with those of an intermittently therapeutic, but non-continuous, regimen of oral penicillin. E. G. L. Bywaters

**Rheumatoid Arthritis**

**Still’s Disease**

**Osteo-arthritis**

**Spondylitis**

**Inflammatory Arthritides**

**Gout**

**Bone Diseases**

**Non-articular Rheumatism, including Disk Syndromes, Sciatica, etc.**

**Pararheumatic (Collagen) Diseases**

**Connective Tissue Studies**

**Immunology and Serology**

**Biochemical Studies**

**Therapy**

**Other General Subjects**

At the end of each section is a list of titles of articles noted but not abstracted.

Not all sections may be represented in any one issue.


This paper from the Centre de Cardio-Rhumatologie Infantile, Nanterre, and the Institut Prophylactique, Paris, describes the behaviour of some acute-phase reactants during the course of active rheumatic fever. The electrophoretic pattern of the serum was assessed in 77 cases at various stages of the disease for the determination of the albumin: α-component ratio (a value of 5:7:1 being accepted as normal, although in six out of twenty healthy children it was between 5:3:1 and 5:7:1 and in one it was below 5:3:1). In another series of (apparently) 87 cases, the erythrocyte sedimentation rate (E.S.R.) was measured serially [method not stated], the “cetavlon” (cetrimide) test of Martin and Badin was carried out (turbidometric values up to 20 units being considered normal), and the serum content of α-component or orosomucoid was measured by electrophoresis at pH 3-9 (values up to 150 sq. mm. being accepted as normal).

The results obtained in the last two tests remained abnormal longer than the E.S.R., and the authors consider them to be more reliable than the E.S.R. as indicators of disease activity. Both the α-component level and the albumin: α-component ratio returned to normal, on average, in 3 months, unless the disease entered into a chronic phase. The effects of hormone and salicylate treatment, of the rebound phenomenon, and of recurrence of the disease were also studied and the detailed results are given.

E. G. L. Bywaters


A comparative trial of phenylbutazone and aspirin in the treatment of rheumatic fever was carried out on 88 patients seen at five hospitals in Scotland, including Glasgow Royal Infirmary. In every case as a routine the
erythrocyte sedimentation rate (Westergren) and anti-streptolysin-O titre were determined, electrocardiography (ECG) and x-ray examination of the chest were carried out, and throat swabs were taken. In 24 cases serial plasma fibrinogen levels were recorded. So far as possible in a trial carried out in several hospitals, alternate patients were given aspirin or phenylbutazone, 41 patients receiving aspirin and 47 phenylbutazone. The dosage schedule of aspirin was that described in the Joint Report of the M.R.C. and American Heart Association (Brit. med. J., 1955, I, 555). A standard course of phenylbutazone was 200 mg. three times a day for 4 days, then 200 mg. twice daily for 2 weeks, followed by 200 mg. daily for at least a further 2 weeks. Both groups received prophylactic penicillin by mouth.

Of the 41 patients in the aspirin-treated group four were afebrile throughout. Of the remainder the temperature became normal within 48 hours in fourteen and within 7 days in 29; fever persisted for more than 2 weeks in four others. In the 47 patients given phenylbutazone the temperature became normal within 48 hours in 29 and within 7 days in 45; two patients were afebrile throughout. The same superiority of phenylbutazone treatment over treatment with aspirin was noted in the time taken for resolution of tachycardia and for relief of joint pain. Whereas the sedimentation rate had returned to normal by the end of 6 weeks in all the patients given phenylbutazone, it was still raised at this time in 22 per cent. of those given aspirin. During treatment fresh acute manifestations occurred in seven patients receiving aspirin, but none was observed in those receiving phenylbutazone. The ECG became normal by the end of the second week in seven out of thirteen with ECG abnormalities in the aspirin-treated group and in twelve out of sixteen in the phenylbutazone group. The latter drug was markedly superior to aspirin in producing a rapid return of the plasma fibrinogen level to normal.

C. E. Quin


Although the role of Group-A haemolytic streptococci in the aetiology of rheumatic fever has been recognized, the case for or against an underlying constitutional susceptibility to the disease, perhaps genetically determined, is still open to question. The study herein reported was undertaken in an attempt to obtain further evidence of the possible association of genetically determined traits and disease susceptibility. A total of 609 subjects who had had rheumatic fever and were on the follow-up register of the House of the Good Samaritan, Boston, all of whom satisfied strict diagnostic criteria, were studied. Samples of blood and saliva were collected from each index subject, from his or her spouse for control purposes, and from the offspring. These were studied for the incidence of ABO, Rh, MN, and Lutheran blood-group systems, Lewis blood groups, and ABH secretion in the saliva. There was an excess of females in the study population with a corresponding excess of males among the controls, but since the genetic traits studied were autosomal as opposed to sex-linked it was assumed that the resulting distribution of pheno-typic frequencies would not be artificially weighted.

There was no difference between the controls and the rheumatic subjects in the frequency of ABO, Rh, MN, and Lutheran blood-group systems. The incidence of non-secretors of ABH substances in saliva was somewhat higher in the rheumatic subjects than in their non-rheumatic mates (in whom, incidentally, there was a higher frequency of non-secretors than in other reported series), but the difference was not statistically significant. As a reflection of this difference the frequency of Le (a+) on the erythrocytes was also somewhat higher among the rheumatic subjects, but not significantly so. It was found that 89 families were characterized by a rheumatic parent who was a non-rheumatic non-secretor. From these marriages there were 239 offspring, of whom 167 (65 per cent.) were secretors and 72 (35 per cent.) non-secretors. These were the expected figures if the frequency of homozygous secretors among the rheumatic parents was the same as in the normal population; thus the hypothesis of Glynn and others (Brit. med. J., 1959, 2, 266; Abstr. Wild Med., 1960, 27, 226) that the presence of the non-secretor gene is essential to susceptibility to rheumatic fever and that all rheumatic secretors must therefore be heterozygous is refuted.

B. M. Ansell


The author reports two cases of major thromboembolic complications in children suffering from severe rheumatic fever with gross carditis who were admitted to St. Vincent’s Hospital, Santa Fe, New Mexico. The first patient was an 8-year-old girl who developed convulsions and left hemiplegia, which eventually cleared almost completely. In the second case, that of a boy of 11, selective oedema of the right arm developed, and this was followed by a sudden pulmonary illness with haemoptysis. He died 24 days after admission. At necropsy gross carditis was present as well as a large thrombus in the right axillary vein, a thrombus in the right atrial appendage, and multiple areas of infarction in the lungs.

John Lorber


Dynamics of Reduced Blood Glutathione Level in the Acute Stage of Rheumatic Fever. (Sledovanie dynamik redukovaného glutatiónu v krvi počas akutnej fázy febris rheumatica.) Černay, J. (1964). Čs. Pediat., 19, 880. 2 figs, 22 refs.
ABSTRACTS


Rheumatoid Arthritis


This is a careful study of a child with symmetrical rheumatoid arthritis involving many joints including the elbows and those of the fingers with onset at the age of 6½ years. The child was examined at age 7, and again at 8½ and 10½ years. On the first two occasions there was no evidence of visceral disease, but fever was present, the erythrocyte sedimentation rate was 62 mm./hr (Westergren), and the latex-fixation test, antistreptolysin O titre, and L.E.-cell test were all negative. At 10½ years exertional dyspnoea started and was accompanied by pleural and pericardial friction, a prezystolic gallop, and an enlarged liver. Radiological and electrocardiographic evidence suggested right ventricular hypertrophy. L.E.-cell tests were again negative but the latex-fixation test was now strongly positive (1:5120). Temporary improvement followed therapy with digitalis and steroids. Catheterization data, pulmonary function data, and lung biopsy led to a diagnosis of cor pulmonale due to pulmonary hypertension due to arteritis of the small pulmonary vessels (illustrated) with intimal thickening and obliteration. Death occurred suddenly 2 months after discharge from hospital and no necropsy was obtained.

E. G. L. Bywaters

Long Remissions in Rheumatoid Arthritis. Short, C. L. (1964). Medicine (Baltimore), 43, 401. 1 fig., 15 refs. [This paper, one of the 21 contributed to the Walter Bauer Memorial Issue of the journal, summarizes one aspect of the long-term study planned by Bauer in 1929 and described in the oration which he delivered to the Heberden Society in 1955. Among the fuller information which he hoped to obtain as the result of this study was a more accurate understanding of the question of clinical remission in rheumatoid arthritis.]

Of 250 patients who were admitted to the Massachusetts General Hospital between 1930 and 1936 with rheumatoid arthritis and who have now been followed up for nearly 30 years, 28 were found to have sustained good clinical remissions averaging 22 years in duration while receiving only simple medical and orthopaedic treatment. In most cases the onset had been acute and the duration of the disease before admission relatively short, and these proved to be favourable prognostic factors. Regular observation of these patients during their long periods of remission suggested, however, that the disease process remained mildly or intermittently active; minor symptoms were of frequent occurrence during this period while the erythrocyte sedimentation rate often remained raised. Nevertheless the patients were able to lead normal lives without functional impairment. In seventeen cases the remissions were interrupted by 31 mild exacerbations of the disease. In about half these cases there appeared to be precipitating factors such as emotional upsets and respiratory infections, but in the other half no cause was apparent for the exacerbations.

W. S. C. Copeman


The author, at the General Infirmary at Leeds, has studied the nature and causation of oedema of the feet and ankles in forty patients (32 males and eight females) with rheumatoid arthritis. He states that the onset of the oedema is usually gradual, but may be sudden, developing within 24 hours. In the present series its duration ranged from one week to 10 years. It is often intermittent, though its occurrence is not necessarily associated with an exacerbation of the arthritis. It is usually bilateral, but may be unilateral, and is rarely symmetrical. The swelling can be massaged away from one area to another; wearing an elastic stocking will shift the oedema higher up the leg. The swelling may be described by the patient as tense, painful, or heavy. Activity reduces the oedema, while sitting or standing aggravates it. It is relieved by raising the legs and usually disappears over night. It also disappears with diuretic therapy. Pitting and non-pitting oedema may be present in the same case. The skin may become congested and cyanosed in time with increase in the number of superficial venules.

In the present series the incidence of oedema was not related to corticosteroid, gold, chloroquine, phenylbutzone, or salicylate therapy. Varicose veins were excluded. Thrombophlebitis was observed in three cases—associated with amyloid disease, lupus erythematosus, and
Reiter's syndrome respectively. Oedema fluid was obtained by acupuncture from eighteen cases, ten of which were seropositive and eight seronegative for the rheumatoid factor. The oedema fluid was colourless or pale yellow without any trace of blood clot. No cells were found on microscopy, this ruling out inflammatory exudate. The range of protein content of the fluid, which was under 1 g per 100 ml in all cases, corresponds closely to that reported by previous workers for venous oedema; there was no correlation with duration of disease or serum protein level. The author considers that the oedema of feet and ankles that occurs in rheumatoid arthritis is due to altered venous function in the lower limbs.

William Hughes


A retrospective controlled study was carried out at the Massachusetts General Hospital, Boston, in an attempt to ascertain whether lungs and pleura are involved in the rheumatoid process. A total of 37 cases with a diagnosis of rheumatoid arthritis were taken from the necropsy records for 1950-5 and matched for sex and age with 37 cases without rheumatoid arthritis. The causes of death in both groups are tabulated. Clinical records and radiographs were surveyed together with the microscopic findings. Histological sections of inflated lung were reviewed without knowing whether they came from the study or the control group.

Respiratory symptoms and physical signs were similar in the two groups, but chest radiographs showed a higher incidence of non-specific increased densities (twelve against six), pleural effusions (eleven against six), and pneumonitis (seven against one) in the patients with rheumatoid arthritis. The only difference in the pathological findings was a higher incidence of pleural effusion with adhesions in the study group. Comparison of thirteen patients in the study group who had been treated with corticosteroids and ten patients who had received only salicylates showed evidence of bronchopneumonia in eight of the former but in none of the latter. The higher incidence of pyelonephritis (nine against five) and amyloidosis (eight against none) in the study group compared with the controls was taken as evidence that rheumatoid arthritis patients are more susceptible to infections which might be a factor in producing pulmonary complications. No cases of diffuse interstitial fibrosis or rheumatoid nodules of lung or pleura were found.

The authors consider that their findings suggest that pulmonary involvement is not a frequent manifestation of the rheumatoid process.

Eric Beck


In view of the diverse changes which have been described as rheumatoid lung in the past, and in order to gain further information about the mesenchymal reactions in the lungs of patients with rheumatoid arthritis, the authors have reviewed 27 cases, selected from the records of the Mayo Clinic for the 10-year period 1950-9, in which a diagnosis of both rheumatoid arthritis and idiopathic pulmonary disease had been made according to rigid criteria. Both the clinical records and the chest radiographs were reviewed. In addition histological sections of the lungs from 76 patients with rheumatoid arthritis, all of whom had died from some other disease and who came to necropsy in 1960, were studied.

Of the 27 patients with idiopathic pulmonary disease, eighteen were men and nine women—a marked male preponderance in a disease which generally has a higher incidence in females. Of these, twelve had had corticosteroid therapy and fifteen had not. In three patients pulmonary changes antedated joint changes, in five they occurred together, and in nineteen joint changes occurred first. The chief pulmonary symptoms were cough (eighteen patients), dyspnoea (fifteen), and pleuritic pain (eight), and these were accompanied by the development of rheumatoid nodules subcutaneously in four patients. In these four and eight other patients exacerbations of disease of the lungs and joints occurred simultaneously.

Radiographs of the seven patients with pulmonary disease of recent onset showed soft, fluffy, "cotton-like" patches, seen more often at the bases, though areas in the upper lobes were occasionally involved. In the twenty cases in which lung disease was already established when they were first seen the radiological appearances were consistent with extensive, diffuse, pulmonary fibrosis. Serial radiographs which were available in three cases showed the progressive changes from soft basilar infiltrates to extensive diffuse fibrosis. New infiltrates were superimposed on old fibrosis with new exacerbations. Clearing of these opacities was never complete, some degree of fibrosis always remaining. Pleural effusion or thickening was observed in six cases with parenchymal changes.

The findings on biopsy of the lung in five of the 27 patients were "strikingly similar", all specimens feeling unusually firm and nodular at the time of operation. Histological examination showed proliferation of interstitial fibrous tissue, both peribronchially and within the alveolar walls; there were infiltration of interstitial tissue with lymphocytes and plasma cells and thickening of small vessels. No lesion resembling a rheumatoid nodule was seen. In only one of the 76 necropsies did histological examination reveal generalized interstitial fibrosis that could be attributed to rheumatoid disease.

The authors conclude that pulmonary disease is a rare manifestation of rheumatoid arthritis. Though the pathognomonic rheumatoid nodules were not found in their cases, in all other respects they resembled those in which other workers have found nodules in the lung or pleura. They consider that the apparent diversity of lung changes can be resolved, as it has been shown that one appearance progresses to another.

Eric Beck


The incidence of rheumatoid arthritis and of the rheumatoid factor (R.F.) in serum in first-degree relatives of
subjects with and without either was studied in a homogeneous population living on an Indian reservation in Montana. There was no evidence of an increased incidence of arthritis or of R.F. in the relatives of those affected compared with controls. In addition, the expected incidence of arthritis or R.F. in offspring of known parents and in pairs of siblings was calculated according to dominant and recessive modes of inheritance. The actual findings fitted either supposition, but were consistent merely with random distribution of arthritis and of R.F.

J. A. Cosh


Cardiopulmonary Manifestations of Rheumatoid Disease in Childhood. JORDAN, J. D. (1964). Sth. med. J. (Bgham, Ala.), 57, 1273. 2 figs, 18 refs.

Still's Disease


Osteo-arthritis


Clinical Experience with a Mixture of Cartilage and Medulla of Bone in Thirty Patients with Osteo-arthritis. (Empregêo clínico de mistura de extratos de cartilagem e medula óssea em 30 pacientes portadores de osteo-artrite.) GAMARSKI, J., CAVARSA, A., and MONTEIRO DO ESPIRITO SANTO, A. (1964). Hospital (Rio de J.), 66, 635. 9 refs.


Spondylitis

Characteristic Features of Female Patients with Ankylosing Spondylitis studied in our Clinic. (Klinigimizde tectik edilen kadın spondilitis ankiplopeti tak诡异 luklari.) ÇÜBÜKÇÜ, O. C., ODMAN, M., and DİLEŞEN, G. (1964). Türk Tip Cem. Mec., 30, 357. 12 refs.

Inflammatory Arthritis


A study of 76 episodes of arthritis following urethritis or cystitis in sixty patients, here reported from the University of British Columbia, Vancouver, has supplied evidence in support of the conclusions of previous workers in Britain and the U.S.A. that the arthritis following gonorrhoea resembles that associated with non-gonococcal urethritis and that both conditions are usually initiated by venereal exposure. Of the 76 episodes studied, sixteen followed proved gonorrhoea. The arthritis in these patients was similar as regards number of joints affected, duration, distribution, and mucocutaneous complications to the sixty episodes associated with non-gonococcal pyuria or urethritis; gonococci could not be isolated from the synovial fluid and penicillin had no effect on the course of the arthritis. T-strain mycoplasmas were found equally in patients with and without arthritis and were therefore not considered to be of aetiological significance; no viruses could be isolated from the conjunctival, synovial, or urethral exudate. In two patients, at least, the arthritis did not follow sexual intercourse, but developed after cystoscopy.

J. H. Baron


This report from Turkey describes 24 cases of arthritis associated with ulcerative colitis and two cases with regional enteritis.

Arthritis was of the peripheral type in eleven and of the spondylitic type in fifteen cases. In most cases arthritis and colitis began simultaneously or colitis preceded arthritis.

The characteristics of the peripheral arthritis were acute and transitory, affecting mostly the big joints, associated in some cases with erythema nodosum and flaring simultaneously with the attack of colitis.

Spondylitis of ulcerative colitis was very much like the classical ankylosing spondylitis clinically and radiologically, and one of the most characteristic features was the insidious onset.

In all the cases the rheumatoid factor tests and L.E.-test were negative.

Oswald Savage

In this report from Turkey a high incidence of ankylosing spondylitis (81 per cent.) and frequent occurrence of radiological heel changes (31 per cent.) were characteristic features. Besides the spondylitis, the joints most frequently involved were the knees, ankles, and feet.

Oswald Savage


Two cases are reported. It is tentatively suggested that there may be a link between ankylosing spondylitis and Reiter's syndrome.

M. A. Bedford


A classical description of the disease. S. Vallon


Bacterial Allergic Reactions in some cases of Inflammatory Rheumatism. (Les réactions d'allergie bactérienne dans quelques cas de rhumatismes inflammatoires.) GROS, M. R. (1964). Montpellier méd., 64, 90. 19 refs.


Gout


This is a case report of a 33-year-old male who received colchicine (0.6 mg. tablets) for a left olecranon bursitis presumed to be due to gout. The bursitis subsided in 3 days, but colchicine was continued (1.2 to 1.6 mg./day). On the twelfth day of therapy an ecchymosis appeared over the left elbow and a standard tourniquet test produced about 100 petechiae. Colchicine was continued for 5 weeks, at which time another tourniquet test was positive. A patch test for colchicine was positive and colchicine therapy was discontinued. Pertinent investigations during this period revealed a persistent hyperuricaemia and a raised urinary uric acid excretion. Platelet counts, bleeding, clotting, and clot retraction times were normal. Liver function tests and a lupus erythematosus preparation were negative. 8 days after colchicine was discontinued the tourniquet test was negative and no purpura have appeared within the year that the patient has been followed.

It is postulated that a hypersensitivity of the individual to small doses of colchicine existed with myotic arrest of the vascular epithelium or depletion of ascorbic acid resulting in purpura.

D. D. McCarthy


Bone Diseases


In recent years much evidence has accumulated that atypical acid-fast bacilli, which were formerly considered to be non-pathogenic, may be responsible for chronic infections of the lungs, and the occurrence of chronic cervical lymphadenitis due to these organisms is now also well documented. Reports of bone lesions caused by atypical mycobacteria, however, have so far been few, and for this reason the present authors, from the Detroit Receiving Hospital and the Herman Kiefer Hospital, Detroit, present an account of two cases of chronic osteomyelitis and chronic lung disease in which atypical mycobacteria were found in smears and cultures of material from the bone lesions and also in gastric washings.

The first patient was a 5-year-old Negro boy who presented with chronic destructive lesions of one metacarpal and one metatarsal bone and subsequently developed an infection of the hard palate. Neither the bone lesions nor a parenchymal lung lesion responded to antituberculous chemotherapy. In the second patient, a 10-year-old Negro girl, the bone infection was confined to the right tibia and both this and a bronchopneumonia of the left lung eventually responded slowly to treatment with PAS and isoniazid. In both cases the acid-fast bacilli isolated from the bone lesions and gastric washings were identified as scotochromogens.

In a review of the literature only five similar cases were found, but the authors suggest that with a greater awareness of the possibility of bone infection by atypical mycobacteria more cases may be discovered. The differentiation of this type of infection from sarcoidosis is fully discussed.

Peter Ring


[The authors report six cases of cyanotic congenital heart disease associated with bony changes seen at the Charity Hospital, New Orleans, Louisiana, and the University of Colorado Medical Center, Denver, and summarize their findings as follows.] “Cyanotic congenital cardiac disorders may be accompanied by roentgenographically demonstrable changes in bone. These roentgenographic changes include diaphyseal thickening of the skull, radiolucent and radiopaque changes in the metaphyses of the long bones, ribs, spine, and pelvis.

Of seventy children with leukaemia studied at the Paediatric Institute in Moscow, forty (35 with acute and five with chronic leukaemia) were found to have changes in the bones. The history was of a gradual onset of fleeting or continuous pain in the bones and joints, swelling of the extremities, and limitation of joint movement. The initial diagnoses included rheumatism, non-specific polyarthritis, brucellosis, and poliomyelitis. Treatment with salicylates, amidopyrines, and antibiotics was ineffective. Radiological investigation revealed foci of destruction in the metaphyses of the long bones, their extent being in proportion to the severity and length of the illness.

In six cases leukaemia infiltration of the spine was present. These children complained of pain in the back and legs which gradually increased until they could no longer walk or sit upright. Radiological examination revealed marked diffuse osteoporosis of the vertebral bodies, with some degree of collapse and an increase in the width of the intervertebral disks, together with marked changes in other parts of the skeleton and even pathological fractures. Involvement of the bones is one of the features of leukaemia which is aggravated by hormone treatment.

The authors considered that in addition to examination of the blood and bone marrow, radiography of the skeleton is important for the early diagnosis of leukaemia. The demonstration of changes in the vertebrae together with changes in other parts of the skeleton is strongly suggestive of leukaemia, but the differential diagnosis from metastasizing tumours may be difficult especially when the appearances in the bone and bone marrow are atypical for any length of time. Changes in the bones are seen more frequently now that improved methods of treatment increase the chance of remission and prolong life in children with leukaemia. Kathleen M. Jones


A male aged 60 had a painful left eye excised, which was subsequently found to be secondary to a retinal vein occlusion. Seven years previous to this he had begun to show general manifestations of alkaptonuria, and the eye was investigated for changes of ochronosis.

These were found to be limited to the sclera, episclera, and the corneo-scleral junction. Pigment deposits were present in the corneo-scleral junction as globules, in the episclera as granular masses, and as less granulomatous pigmentation of the sclera, being limited to the 3 and 9 o’clock meridians, and extending back to the muscle insertions. The episclera showed swollen veriform fibres, that were possibly degenerate elastic fibres but might have been changed collagen. In the pigmented parts of the sclera there were no cells. Although the pigment could not be distinguished from melanin, the destructive nature of this pigment is quite unlike melanin.

A. J. Karlish


A histological study of the endo and aorta in six cases of Marfan’s syndrome is described. This showed that the fundamental lesion in the cardiovascular system is due to an over-accumulation of chondroitin sulphate followed by disruption of the elastic fibres. Ultrastructural studies failed to reveal any abnormality of the fine structure of the collagen fibres.

J. H. Kelsey


A case is reported and the authors discuss the possible causal association of Marfan’s syndrome and schizophrenia.

M. H. T. Yuille


The author describes a patient who had Marfan’s syndrome and coarctation of the aorta. The author mentions the occurrence of gonioscopic changes found in this and other musculo-skeletal disorders.

G. Davies


M. J. Jones

Non-articular Rheumatism


Having previously described a needle biopsy technique for lesions of the spine as a whole, the authors now discuss the special aspects of cervical spine biopsy. The technique involves the use of a 2 mm. bore needle, which is inserted, under general anaesthesia, from in front through the pharynx for aspiration of the first three cervical vertebrae. For lesions of the remaining cervical spine, a brachial plexus block is employed and the approach is from the side of the neck. A posterior approach is indicated for examination of the spinous process.

Needle biopsy permitted a definite diagnosis in 27 of 34 cases studied, and no untoward sequelae were associated with the technique.

A. Garner

The case is presented of a 24-year-old man who complained of pain in the back and flank, which was found to be due to an accessory lamina projecting from the superior articular process of the first lumbar vertebra. Decompression of the underlying nerve-root by excision of the offending bony projection resulted in complete remission of symptoms.

A. Garner


A series of sixteen patients suffering from the carpal-tunnel syndrome is described and a brief summary of the history, pathology, and clinical diagnosis is given.

It is stated that the average age of sufferers is 45 years and that the condition occurs in individuals doing light manual work requiring repetitive movements of hand or wrist. The authors "have found no treatment effective except surgical decompression of the carpal-tunnel". They recommend identification of the median nerve at operation by electrical stimulation.

D. R. Sweetnam


Discitis is here defined as narrowing of a disk space associated with vague back or leg pain, a stiff back, mild toxemia, and rapid resolution of the lesion when the patient is rested. It appears to be a disease of childhood occurring at any age from infancy to puberty and can persist for long periods if untreated. In a series of 35 cases, the affected disk was in the lumbar spine in 74 per cent., in the thoracic spine in 24 per cent., and in the cervical region in only one case. Radiologically disk narrowing becomes evident about 3 weeks after the onset of symptoms and progresses for several months, with erosion of the vertebral margins in some instances. Rest in bed until the erythrocyte sedimentation rate returns to normal and symptoms have completely subsided is generally associated with a favourable outcome; at the time of review (follow-up for more than 2 years in nearly all cases) only five patients showed any residual defect.

A. Garner


Humero-scapular periarthritis is a term which covers a multitude of conditions. According to Bloch there are two stages in the disease process. In the first or acute stage there is "fibrosis" of the periarticular tissues. In the second or degenerative stage, usually after a few months, there is progression to fibrosis; the inflammatory changes result in the massive production of fibrin and its organization, with consequent restriction of joint movement. The treatment usually prescribed frequently leaves the patient with a rotation defect in the joint. In view of the above theory the authors, at the Municipal Orthopaedic Clinic, Aachen, Germany, decided to try the effect of fibrinolytic enzymes, which can now be given by mouth.

The preparation used, "varidase", contains 10,000 units streptokinase and 2,500 units streptodornase in each tablet, which is allowed to dissolve slowly in the mouth. The trial was carried out on fifty patients (22 men and 28 women aged 20 to 68 years) with periarthritis in the degenerative stage. The right shoulder was involved in 31 cases, the left in seventeen, and both in two. The range of shoulder movement was recorded by goniometer before and after treatment. Each patient took four varidase tablets daily for 7 days. The relief of pain was impressive and side-effects negligible. In isolated cases a relapse occurred 1 to 2 weeks after ceasing to take the tablets, and the authors therefore advise that physiotherapy should immediately follow the course of varidase. In eleven patients in the series (over 20 per cent.) the results were excellent, with full restoration of function, and in eighteen (36 per cent.) there was only slight residual restriction of movement. In only seven cases (14 per cent.) there was no improvement. The number of cases was too small for a definite conclusion to be drawn, but it is suggested that varidase may have other applications—for example, in teno-vaginitis, post-operative, post-traumatic, or post-arthritic "frozen shoulder", and Sudeck's atrophy.

D. Preiskel


Connective Tissue Studies


Deep or subcutaneous nodules with a "rheumatoid" histology may occur in rheumatoid arthritis, rheumatic fever, or granuloma annulare. Occasionally such nodules appear with no other manifestations of any of these diseases. When isolated deep rheumatic nodules occur in children without any past or present history of acute rheumatism, they almost always follow a benign course, similar to that of granuloma annulare, without
ABSTRACTS

subsequent acute rheumatism or rheumatoid arthritis. This contrasts with similar nodules appearing during or after an attack of rheumatic fever, when they betoken continuing activity. On the other hand, in adults such isolated "rheumatoid" nodules may be the first sign of rheumatoid arthritis; the case histories of two patients are recorded. H. J. Wallace


Histological fragmentation of the elastica in macroscopically normal skin is described for the first time in a patient with the nail-patella-elbow syndrome. H. J. Wallace


Following an earlier account of the ultrastructural changes occurring during life in the articular cartilage of the mouse hip joint, the same authors describe their findings after the subcutaneous administration of purified growth hormones. They found that the sequences of growth, development, and ageing in the cartilage of weanling mice were both accelerated and accentuated. Thus the cells became hyperplastic and their organelles appeared prematurely and in increased numbers, suggesting a high rate of synthetic activity. After 4 weeks of treatment there was premature breakdown of chondrocytes, their place being taken by fibrous microscars (a finding similar to that they had previously observed in ageing cartilage). In the matrix there was increased fibrillarity progressing to disorientation of the superficial fibres, and fraying of the articular surface. It is proposed therefore, that the effect of somatotrophin resembles a true ageing change and that excessive cellular activity during early development leads to rapid exhaustion. This relationship of growth to degenerative changes is finally discussed in the context of osteoarthrosis of old age. A. Garner


This paper comprises the material of a lecture in an instructional course of the American Academy of Orthopaedic Surgeons. It describes the detailed anatomy of the synovial tissues including their ultrastructural appearances. A résumé of the chemical and physical properties of synovial fluid is also given, together with a programme for the examination of aspirated specimens. Mention is made of the typical findings in both the fluid and tissue in traumatic arthritis, osteo-arthritis, rheumatoid arthritis, specific infections, gout, pigmented villonodular synovitis, and haemophilia. A. Garner


Immunology and Serology


In this communication the author reports studies of the influence of age and hypersensitivity on the lesions produced in rabbits following the intradermal injection of a peptide-C polysaccharide complex from the cell walls of β-haemolytic streptococci.

After such injection, distinctive phases of allergic response are observed. Early reactions, consisting of red soft oedema, subside after 48 hours, but are followed in older animals by firm indurated erythema, which reaches a peak 2 to 4 days after injection. In these lesions necrosis is not seen. Some 4 to 16 days after injection a nodular lesion appears, becoming chronic and remittent for periods of up to 80 days following a single injection. It is reported that animals under 4 weeks of age show no gross allergic skin reaction; in subsequent age periods allergic reactions become maximal at 4 hours, 23 hours, and 2 to 4 days after injection.

The relapsing nodular lesion, however, does develop in neonatal animals, reaches a peak response in young animals during the period of most active growth, and decreases in severity in older animals whose degree of hypersensitivity is increasing. Passive transfer of spleen cells or serum from sensitized adult animals does not influence the nodular reaction in neonatal animals. These observations indicate that the production of the chronic nodular lesion is not dependent on the state of hypersensitivity of the injected animal, as such lesions develop in neonatal animals whose immunological competence is not well developed. T. M. Chalmers


The authors of this communication from the University of Melbourne report techniques for the determination of the cellular basis of the production of 19S antibody to Salmonella flagellar antigen in rats. Methods are given for the immunization of the rats, for the titration of antibodies in serum, and for the treatment of serum samples with 2-mercaptoethanol (ME). Such treatment has been shown to destroy the antibody activity of macroglobulins while leaving that of 7S gamma globulin unaffected. Zone centrifugation of serum samples is described and details given of the methods used for the preparation of single cell suspensions from immunized popliteal lymph nodes. From such preparations the antibody content of single cell droplets was estimated, cells with antibody on their surface being identified by the method of bacterial adherence.
After immunization, it was shown by zone centrifugation of serum samples that the first response in the rats was the formation of 19S ME-sensitive antibody. This was quickly replaced by 7S ME-insensitive antibody. Of 144 single cells tested, 123 contained readily detectable amounts of antibody. These comprised 42 19S cells, 64 7S cells, and seventeen double producers. All except four of the cells in the study were identified as members of the plasma cell series. While 7S cells became more frequent as the cell population matured, there was no clear-cut correlation between cell immaturity and 19S production. In the primary response many fully mature plasma cells contained only 19S antibody; conversely in the secondary response many blast cells contained 7S antibody. No morphological differences between 19S and 7S cells could be found.

The results suggest that many cells or cell clones go through a sequence whereby each forms 19S and later 7S antibody with identical combining sites.

T. M. Chalmers


At the University of Utrecht, The Netherlands, the authors explored the hypothesis that complement might be concomitantly bound with γ-globulin to the basal membrane of the skin of patients with chronic discoid or systemic lupus erythematosus. Duplicate sections of diseased skin from six patients with discoid lupus erythematosus and from two with systemic lupus erythematosus were stained with fluorescein-conjugated antihuman complement serum and with fluorescein-conjugated antihuman globulin serum. All specimens showed fluorescence of the basement membrane at the dermal-epidermal junction. This staining was inhibited by previous treatment of the sections with unconjugated antihuman complement or by neutralizing the fluorescein-labelled antihuman complement with human complement. Treated sections from other skin lesions occasionally showed poorly demarcated fluorescence in the same region, but this was easily distinguishable from the specific staining of lupus erythematosus. The authors consider this to be an immunological reaction of possible diagnostic value.

Ann Rheum Dis: first published as 10.1136/ard.24.2.189 on 1 March 1965. Downloaded from http://ard.bmj.com/ by guest. Copyright: M. Wilkinson


The author reviews published work on the incidence of systemic lupus erythematosus (S.L.E.) and of serological abnormalities in relatives of patients with S.L.E. He then reports a continuation of a previous study (Lancet, 1960, 2, 1061; Abstr. Wld Med., 1961, 29, 265) of the incidence of antinuclear antibodies in serum from relatives of patients with S.L.E. seen at the Presbyterian—St. Luke’s and Research and Educational Hospitals, Chicago.

The results of both studies were similar whether human buccal mucosa cells or calf thyroid cells were used as the source of cell nuclei for immunofluorescent testing. In the first study, in which buccal mucosa cells were used, the results were positive—that is, nuclear fluorescence occurred—in 91 per cent. of 112 patients with S.L.E., in 23.9 per cent. of 127 patients with rheumatoid arthritis and other collagen diseases (in some of whom the L.E.-cell test was positive), and in 4 per cent. of 271 patients with other non-collagen diseases such as cirrhosis, allergic or drug reactions, and dysproteinamia. The result was negative in all 71 healthy control subjects studied. It was positive in 47 (33 per cent.) of 142 first-degree relatives of 43 patients with S.L.E. and in ten (21 per cent.) of 47 second-degree relatives, though the titres were lower than in the propositi. Clinical S.L.E. developed in one relative in each of four families and in a fifth family a mother had scleroderma. The proportion of positive results in members of these four families was significantly higher than in other families without second clinical cases. The proportion of positive results in relatives of patients with S.L.E. was significantly higher than that found in healthy subjects or in patients with diseases unrelated to S.L.E. Antinuclear antibodies were not found in serum from 24 relatives of ten healthy subjects who were matched for age, sex, and race with propositi suffering from S.L.E.

The author suggests that both genetic factors and precipitating environmental agents are involved in the pathogenesis of S.L.E.

M. Wilkinson


Sera from 35 patients with systemic lupus erythematosus (S.L.E.) were examined at the University of Oklahoma Medical Center, Oklahoma City, for the presence of antibodies to deoxyribonucleic acid (DNA) and to nucleo-protein (NP). After flooding prepared spots of DNA and of NP with test serum, binding of antibody was detected with fluorescent antihuman γ-globulin.

The results of the DNA spot test invariably agreed with those of other tests for anti-DNA antibody—namely, the complement-fixation test and tests for the presence of the "shaggy" nuclear reaction pattern (see Friou and others, J. Lab. clin. Med., 1963, 62, 625; Abstr. Wld Med., 1964, 35, 132). Some sera reacted with NP only and others with both NP and DNA, but none with DNA alone. This finding and the results of neutralization tests suggest that antibody to DNA also reacts with NP, whereas antibody to NP reacts with NP alone. A total of 35 out of 37 sera (two patients were studied on two different occasions) showed antibody against NP and nineteen showed antibody against DNA. Antibody against DNA was found only in patients with active lupus erythematosus, and serial tests showed titres which fell in parallel with remitting disease, in contrast with antibody titre against NP, which correlated poorly with disease activity. From these results the authors suggest that antibody to DNA may be the cause of some of the acute-phase manifestations of S.L.E., and this is supported by the demonstration in eight cases of the "shaggy" nuclear pattern when serum and cells from the same patients were tested together.

Ziff and his colleagues (Amer. J. Med., 1956, 20, 500; Abstr. Wild Med., 1956, 20, 387), using the sheep erythrocyte technique, have shown that in known cases of rheumatoid arthritis rheumatoid factor can be demonstrated more consistently in the euglobulin fraction than in whole serum. They also demonstrated an inhibitor of this agglutination reaction which was usually present in normal serum but not in that from cases of rheumatoid arthritis. The author of this paper from Tulane University School of Medicine, New Orleans, Louisiana, has used similar techniques but with the substitution of latex particles for sheep erythrocytes. Of 180 definite and 25 probable cases of rheumatoid arthritis, 165 (92 per cent.) and 21 (84 per cent.) respectively showed agglutination with the latex test and only eight (4-5 per cent.) of the 205 patients possessed inhibitor. Only seven (29 per cent.) of 24 juvenile rheumatoid arthritics showed agglutination and fourteen (58 per cent.) possessed inhibitor. About half the adults who gave negative agglutination reactions later developed positive reactions. Of 38 patients with systemic lupus erythematosus, ten (26 per cent.) had a positive agglutination reaction and seventeen (45 per cent.) possessed inhibitor. Agglutination was also demonstrated in approximately half the patients with scleroderma and polymyositis and in fourteen (7 per cent.) of 204 osteo-arthritics, but not in any of Reiter’s syndrome, ankylosing spondylitis, psoriasis, bacterial arthritis, or rheumatic fever. The author recommends the latex agglutination test as a useful diagnostic procedure, but the demonstration of inhibitor proved difficult, was less reliable, and gave little additional diagnostic help.

M. Wilkinson


The authors, who report from the University of Texas Southwestern Medical School, Dallas, and the New York University School of Medicine, New York, used the indirect immunofluorescent technique to study the relationship of the serum heart-muscle antibodies to the clinical state of rheumatic fever, the influence on them of recent streptococcal infection, and the occurrence of these antibodies in other disease states. Serum was obtained from 624 subjects, of whom 171 had acute rheumatic fever (two-thirds of them in an initial attack) and 201 had inactive rheumatic disease (66 with and 135 without heart disease); there were also 66 healthy subjects (including 51 children), and the remaining patients suffered from a wide range of cardiac and non-cardiac disorders.

With the immunofluorescent technique three patterns of staining were noted—sarcolemmal-subsarcolemmal (designated SS), intermyofibrillar (IMF), and diffuse. The incidence of positive SS-IMF staining reactions was highest in acute rheumatic fever (41-5 per cent.), particularly when there was associated active carditis. Subjects with inactive rheumatism showed only 16-4 per cent. positive reactions, suggesting that the factors do not persist indefinitely. Of 22 patients with myocardial infarction, only 27 per cent. showed a positive staining reaction and this was of the diffuse type. The diffuse pattern was occasionally seen in acute glomerular nephritis and in rheumatoid arthritis. The incidence of positive reactions in the healthy subjects was very low. The incidence of SS-IMF staining reactions was greatly increased in serum taken between the eighth and tenth days after cardiac surgery for rheumatic heart disease, but not after surgery for congenital heart disease. The authors consider that the increase in the former cases might be related to a reaction to cardiac antigens released at operation. No relationship was found between positive reactions and either the antistreptolysin-O titre of patients with rheumatic fever or the development of streptococcal infections in patients with a rheumatic history without evidence of a new episode. It is concluded that the evidence obtained suggests that these serum factors, as demonstrated by the immunofluorescent technique, are antibody in nature.

William H. S. George


In a study of the production of a necrotizing arteritis as part of an autoimmune reaction, carried out at the University of Texas Southwestern Medical School, Dallas, rats were inoculated with extracts prepared from the walls of the aorta and larger arteries of normal rats together with Freund’s adjuvant. Of the thirty animals so treated, twenty developed within 4 weeks a precipitating antibody in their serum against the arterial-wall extract, and at the end of 5 weeks these rats were found to have characteristic lesions of periarteritis with macroscopic nodule formation and a necrotizing inflammatory reaction in the walls of the mesenteric arterioles. Further evidence that these lesions were part of an autoimmune reaction was provided when fluorescein-conjugated globulin from rats which had anti-arterial-wall precipitins in their serum was found to stain normal arterial walls. The authors make the point that this particular variety of immunologically induced periarteritis differs from the necrotizing vasculitis seen in the rat after renal infarction in the absence both of renal arteriolar lesions and of hypertension—the last two therefore may be presumed to be connected.

M. Harrington


At Tufts University School of Medicine and St. Margarets Hospital, Boston, Massachusetts, the authors studied the frequency with which antinuclear factor (ANF) occurs in normal human serum and the mechanism by which freezing and thawing enable its presence to be detected. ANF was determined by the conjugated fluorescein goat antihuman globulin method on a substrate of unfixed human skin. Strict adjustment of pH between 7-0 and 7-5 was maintained. Sera from 78 hospital patients and 54 healthy controls which gave negative reactions for ANF when tested by the fluorescent antibody method were frozen at -20°C. and then allowed...
to thaw gradually at room temperature. The almost
colourless and watery top fraction of each sample was
then separated and retested.

The top fractions of the sera of the patients and controls
now gave positive ANF reactions in sixty (77 per cent.)
and 41 (76 per cent.) instances respectively. The middle
and bottom fractions still gave negative reactions. A
further 199 serum samples (134 from females, 65 from
males) showed no significant sex difference as occurs
in systemic lupus erythematosus; the lower fractions
never showed any ANF. The top fractions were shown
to contain less protein and less chloride (37 mEq. per litre)
compared with the normal whole-serum chloride value
of 100 mEq. per litre. Remixture of the positive top
fraction with either the middle or bottom fraction remain-
ging gave an ANF-negative reaction. Mixing the
positive top fraction with physiological saline also pro-
duced negative ANF reactions. Dialysis of pooled
ANF-negative serum against phosphate buffer of low
ionic strength yielded ANF-positive material, but its
reaction could be reversed to ANF-negative by the
addition of inorganic salts. The reaction of a serum
which was initially ANF-positive could not be reversed
in this way, but the titre of antinuclear globulin could be
enhanced by dilution with buffers of low ionic strength.
Of 50 ANF-negative sera from pregnant women, the top
fractions of 75 per cent. were ANF-positive; this positivity
was not demonstrable in the top fraction of serum from
the cord blood of their infants, which suggests that the
antinuclear factor resides in the $\beta_{2a}$- and $\beta_{2m}$-globulins.

The authors discuss their results in regard to current
theories of antinuclear formation and suggest the
existence of a parallelism between connective-tissue
disorders and human allergic states.

---

Effect of Dexamethasone and Nitrogen Mustard on the
Production of Rheumatoid Factor in Rheumatoid Arthritis.

This paper from Queen's University, Kingston, ON-
tario, reports a study of the effects of glucocorticoids and
nitrogen mustard on the serum level of rheumatoid factor
as measured by the sheep erythrocyte agglutination and
latex agglutination tests in nineteen patients with classic
rheumatoid arthritis. Their ages ranged from 16 to 74
years and the degree of disease from mild to severe.
Dexamethasone was given to six patients in a dosage of
6 to 8 mg. daily for 2 weeks followed by a small main-
tenance dose; twelve had nitrogen mustard, 0-3 mg. per
kg. body weight by infusion; and the remaining patient
received both drugs together.

In both tests the titre began to fall by the fourteenth
day; the falls were most pronounced at about 30 days and
were still apparent at 60 to 90 days. Accompanying falls
in the erythrocyte sedimentation rate were much more
marked. The two drugs appeared to have essentially
similar effects, though dexamethasone was the more
potent. In the patient receiving both drugs there was a
transitory disappearance of rheumatoid factor from the
serum. Some natural variation in titre in both tests was
apparent in controls. It is concluded that dexamethasone
and nitrogen mustard have the ability to suppress the
formation of the macroglobulins associated with rheuma-
toid arthritis.

---

Haemagglutination by Rheumatoid Factor of Cells coated
Biol. (N. Y.), 116, 585. 1 fig., 18 refs.

It has been suggested that rheumatoid factor (R.F.) is
an autoantibody reacting primarily with low-molecular-
weight (7S) human $\gamma$-globulin and with cross-reactivity
with rabbit $\gamma$-globulin. If this is so, cross-reactivity with
the $\gamma$-globulins of other species, especially mammals,
might be expected and the investigations reported here
from the University of Rochester School of Medicine and
Dentistry, Rochester, New York, were designed to test
this hypothesis. The bisdisazotized benzidine (BDB)
haemagglutination technique of Gordon and others (J.
exp. Med., 1958, 108, 37) was found to be more satisfac-
tory for this purpose than the tanned sheep cell method;
it was relatively independent of the state of aggregation
of the coating $\gamma$-globulins, and good reproducibility was
obtained with the egulobulin fraction of serum containing
R.F.

A strong reaction was obtained with human erythro-
cytes coated with human, rabbit, and equine $\gamma$-globulin,
a less strong reaction with cells coated with bovine, pig,
and guinea-pig $\gamma$-globulin, and little or no reaction with
cells coated with chicken $\gamma$-globulin. The $\gamma$-globulins
of various species were shown to inhibit the agglutina-
tion by R.F. of cells coated with $\gamma$-globulin of their own or
to a lesser degree, of other species. All agglutinating
activity against animal $\gamma$-globulins could be absorbed
from R.F.-containing sera with an insoluble preparation
of BDB-treated human $\gamma$-globulin. No significant re-
activity of R.F. with immunoglobulins other than the 7S
$\gamma$-globulins was demonstrated. It was found that cells
coated by the BDB technique with aggregated human
$\gamma$-globulin were slightly but significantly more reactive
with R.F. than cells coated with unaggregated $\gamma$-globulin,
though they were less reactive with rabbit antisera to human $\gamma$-globulin; this is held to support the theory that
R.F. has greater specificity for denatured than for normal
$\gamma$-globulin.

Lack of Rheumatoid Factor in Psoriatic Arthritis. [In
English.] LASSUS, A., MUSTAKALLO, K., K., LAINE,
15 refs.

The authors of this paper from University Central
Hospital, Helsinki, and the Rheumatism Foundation
Hospital, Heinola, Finland, have studied the response to
the Waaler-Rose and latex fixation tests of three groups
of patients—140 with rheumatoid arthritis, 104 with
psoriatic arthropathy, and eighty with psoriasis uncom-
licated by joint involvement. The average duration of
joint symptoms was more than 5 years in the patients
with rheumatoid arthritis and 9 years in those with psoriatic
arthropathy.

In each group the response to the latex test was positive
more often than was the response to the Waaler-Rose test
—rheumatoid arthritis 85·7 per cent. and 69·3 per cent.
of patients respectively, psoriatic arthropathy 16-8 per cent. and 12-2 per cent., and psoriasis 1-3 per cent. and 0 per cent. In the ten cases of psoriatic arthropathy in which the erosions were "typically" confined to distal finger- and toe-joints the results of the tests were virtually all negative. In the remainder, in which the erosions resembled those of rheumatoid arthritis in appearance and distribution, the response to the tests was less often positive than in rheumatoid arthritis; moreover, it was positive in lower titres.

It is suggested that some of these patients had rheumatoid arthritis with coincidental psoriasis and that the presence of psoriasis in some way inhibited the formation of the rheumatoid factor. In support of this the authors point out that in cases of uncomplicated psoriasis the results of the test were less often positive than in the general population.

J. A. Cosh


Pararheumatic (Collagen) Diseases


The patients described in this study were seen in Calcutta during 1963. Amongst many other investigations the authors give antistreptolysin O levels, sheep cell agglutination titre, L.E.-cells, antinuclear factor, serum complement study by the fluorescent antibody technique of both arterial biopsies from the patient for bound globulin, and the study of sera for globulin reactive with normal human aorta. The sera of patients were also studied with aorta suspensions as antigen by the tanned cell haemagglutination test, by latex particle agglutination, complement fixation, and immunodiffusion in agar. Very full clinical details are given for the five cases. Clinical signs and symptoms showed a very wide range,
a prominent sign being hypertension. It was found that pathology might involve just the arch of the aorta or any large branches. The smaller arteries and arterioles seemed to be spared. Patchy intimal thickening was found with narrowing of lumen and thrombosis. Histology showed involvement of media, adventitia, and intima. Lymphocytes, plasma cells, macrophages, and giant cells were found. One patient showed L.E.-cells and three had antinuclear factor. All had hypergamma-globulinaemia but all other investigations proved to be generally normal.  

G. Loewi


The authors share the opinion of previous writers, that there is a form of periarteritis nodosa in which cutaneous manifestations, and particularly livedo, predominate and in which the prognosis is often better than in overt systemic polyarteritis. A study of three of the authors’ patients however suggests that cutaneous and systemic polyarteritis are not separate entities.  

H. J. Wallace


Apart from local inflammation and hair loss in temporal arteritis skin manifestations in giant cell arteritis are rare. Purpura, haemorrhage, bullae, and necrotic ulcers particularly in the scalp, massive bilateral scalp necroses, and necrosis of the anterior part of the tongue are recorded. Three case histories, one with tongue and two with scalp necrosis, are discussed, together with one autopsy report. Haemorrhage or exudate from a damaged artery rather than arterial occlusion appears to be the causative mechanism in the necrosis. The authors consider that giant cell arteritis and polyarteritis are closely related.  

H. J. Wallace


The authors of this paper from the University of Turku, Finland, have reviewed the chest radiographs of 78 patients who were treated for systemic lupus erythematosus during the years 1959-62. Of these, fifty showed one or more nonspecific radiological abnormalities at some stage in the illness. These were classified as: pleural effusion on one or both sides (34 patients); increased vascular markings (37 patients, but in five of these this was the only abnormality); nodular shadows, mostly less than 1 cm, in diameter and in one instance proceedings to cavitation (11); ill-defined amorphous parenchymal shadows not attributed to complicating pneumonia or tuberculosis (9); “strangulated densities” [not defined, but presumed to indicate interstitial fibrosis] in nine cases; basal laminar atelectasis (9); and cardiac enlargement (28).

Abnormal chest radiographs were obtained from almost all patients with symptoms of intrathoracic disease, but also from 23 patients without such symptoms. Radiological abnormalities were significantly more frequent in patients who gave a positive reaction to tests for rheumatoid factor and in those with a high antistreptolysin titre. [The radiographs reproduced are unfortunately too small to interpret.]  

M. Wilkinson


The object of the study here reported from the Johns Hopkins University School of Medicine, Baltimore, was to determine whether oesophageal aperistalsis is associated only with scleroderma or also with other connective-tissue disorders. To this end intraluminal pressure measurements were made in 71 patients, including 25 with scleroderma of generalized distribution, sixteen with systemic lupus erythematosus, 21 with other connective-tissue disorders (rheumatoid arthritis, dermatomyositis, Sjögren’s syndrome, polyarteritis, and polymyositis) none of whom showed sclerodermatous skin changes, and nine with Raynaud’s phenomenon only. Aperistalsis of the oesophagus was found in 21 of the 25 cases of scleroderma; it was also present in four cases of systemic lupus erythematosus, in three cases of other connective-tissue disorders, and in five of the nine cases of Raynaud’s phenomenon. An outstanding finding was that Raynaud’s phenomenon was significantly more frequent among patients with aperistalsis; forty of the 71 patients studied, including 23 of the 25 with scleroderma, had Raynaud’s phenomenon. Thus the two conditions would appear to be intimately related, and this association, taken together with the usual absence of structural changes in the oesophagus, suggests to the authors some abnormality of the autonomic nervous system as the cause of the oesophageal dysfunction.  

G. Loewi


A severe acute exacerbation of apparently longstanding dermatomyositis is reported in a boy aged 5 years. The attack may possibly have been precipitated by paraaminosalicylic acid or isoniazid which had been started 3½ weeks earlier. It was associated with non-tuberculous miliary mottling on the chest x ray. Response to cortisone analogues was most impressive but was interrupted by an attack of haemorrhagic varicella.  

L. Hall
Clinical Manifestations of Systemic Lupus Erythematosus.

Course and Prognosis of Visceral Lupus Erythematosus.

Genetic Studies of Systemic Lupus Erythematosus.

Serological Reactions in Systemic Lupus Erythematosus.

Takayasu's Arteritis and Rheumatoid Arthritis.

Evidence for a Predisposition to Rheumatic Diseases in Families of Patients developing Drug-induced Systemic Lupus Erythematosus.

A Clinical-pathological Study of Aleutian Mink Disease; an Experimental Model for Study of the Connective Tissue Diseases.

Small Intestine as Site of Fundamental Lesion in Connective Tissue Diseases.

Collagen Disease (a Case of Still's Disease in Association with Dermatomyositis).

ABSTRACTS

203

Clinical Manifestations of Systemic Lupus Erythematosus.


The diagnostic criteria of this condition are clinical features of systemic lupus erythematosus with the finding of lupus erythematosus cells in the majority of cases. Patients with rheumatoid arthritis or "lupoid" hepatitis who have lupus erythematosus cells are not included. A table of 71 features of the condition is given with the percentage incidence of each. Eye signs come low in the Table with 9-6 per cent. cytoid bodies and 0-5 per cent. haemorrhages of the retina, 1 per cent. had diplopia 0-8 per cent. uveitis, and 10-3 per cent. conjunctivitis, 1-4 per cent. of these from Sjögren's syndrome. The association of eye changes with other features of the condition is noted. The prognosis of the condition has improved markedly since the introduction of steroids.

J. H. Kelsey

Genetic Studies of Systemic Lupus Erythematosus.


A group of workers discusses the findings in the serological investigations of families in which systemic lupus erythematosus and similar disorders occur. There is a high incidence of manifest collagen tissue disease or serological abnormality.

J. H. Kelsey

Serological Reactions in Systemic Lupus Erythematosus.


This is a discussion between various workers about the results of their serological tests in systemic lupus erythematosus and related disorders.

J. H. Kelsey

Takayasu's Arteritis and Rheumatoid Arthritis.


Evidence for a Predisposition to Rheumatic Diseases in Families of Patients developing Drug-induced Systemic Lupus Erythematosus.


A Clinical-pathological Study of Aleutian Mink Disease; an Experimental Model for Study of the Connective Tissue Diseases.


Small Intestine as Site of Fundamental Lesion in Connective Tissue Diseases.


Collagen Disease (a Case of Still's Disease in Association with Dermatomyositis).

lack of response in a patient with true Addison's disease and low responses in two patients with pituitary-adenal insufficiency. The results of studies of ACTH suppression by dexamethasone administration were clear cut and in accordance with the clinical diagnosis. The value of the suppression test in the diagnosis of Cushing's syndrome was effectively shown. In tests with metyrapone, patients with suspected pituitary insufficiency had lower peak levels of 11-deoxycorticisol, suggesting that the pituitary release of ACTH was diminished. The authors are of the opinion that the 11-deoxycorticisol response is the best indication of pituitary reserve.

This paper shows the value of a rapid method of measurement of plasma corticoid levels. The superiority of estimations of plasma steroids over urinary steroids is stressed.

D. A. Pitkeathly


The serum salicylate level after oral administration of proprietary tablets each containing a mixture of 485 mg. salicylsalicylic acid and 160 mg. acetylsalicylic acid was estimated at Lynn Hospital, Massachusetts, in seventeen patients aged 54 to 80 years who had osteo-arthritis of mild or moderate degree. They received four or five tablets of the drug combination daily, depending on body weight. The mean serum salicylate level, determined by the method of Routh and others (Clin. Chem., 1956, 2, 432) was 10-2 mg. per 100 ml. 24 hours after the start of treatment, 14-5 mg. per 100 ml. on the eighth day of treatment before the morning dose was administered, and 15-5 mg. per 100 ml. on the eighth day after the midday dose.

In spite of considerable individual differences in response, thirteen of the seventeen patients had a serum salicylate level of at least 5 mg. per 100 ml. after 8 hours and of at least 10 mg. per 100 ml. after either 24 hours or 8 days or both.

The author considers that this preparation allows the maintenance of desirable therapeutic levels of salicylate during the evening and early morning, in contrast to the low salicylate levels obtained at these times with acetylsalicylic acid alone.

The value of this study would have been greater if the serum salicylate level obtained after acetylsalicylic acid alone had been compared with those after acetylsalicylic acid alone.

Bernard Isaacs


The authors, at the University of Wisconsin Medical School, Madison, have measured the excretion of tryptophan metabolites in twenty patients (fifteen female and five male) with rheumatoid arthritis, tryptophan metabolism having been found to be abnormal in various other chronic diseases. All the patients gave a positive reaction in the latex fixation test, ten had subcutaneous nodules, and fourteen had radiographic evidence of characteristic bone erosions. For control purposes a number [not specified] of healthy adults, four females with active rheumatoid arthritis but with a negative latex reaction, two males with ankylosing spondylitis and three with psoriatic arthritis but a negative latex reaction, and two males with topheaceous gout were studied. The excretion of tryptophan metabolites was measured in 24-hour collections of urine made before and after a loading dose of 2 g. L-tryptophan given by mouth. In most cases this procedure was repeated with the additional administration of 25 mg. pyridoxine four times a day for the 2 days.

It was found that after tryptophan loading the excretion of anthranilic acid glucuronide, acetylykynurenine, and hydroxykynurenine was higher in the patients than in controls of the same sex. The controls also showed some increased excretion of these metabolites, but less than that which occurred in the test group. In the female patients excretion of 4-pyridoxic acid was estimated and found to be normal, implying that their intake of pyridoxine, which is essential for the normal metabolism of tryptophan, was adequate. However, supplementary pyridoxine administration to eleven of these patients consistently reduced the post-tryptophan excretion of acetylykynurenine, kynurenine, hydroxykynurenine, and xanthurenine to nearly normal levels. The authors suggest that there is a functional pyridoxine deficiency in patients with rheumatoid arthritis which can be demonstrated only by tryptophan loading.

G. Loewi


An abnormality in the metabolism of corticosteroids in patients with rheumatic disease is suggested by the widespread experience that patients with systemic lupus erythematosus and some with rheumatoid arthritis can tolerate large doses of corticosteroids for long periods without the appearance of side-effects. Although previous studies of plasma steroid levels and the urinary excretion of 17-hydroxycorticosteroids in such patients have failed to show any significant abnormalities, the urinary excretion of free cortisol has not been so extensively investigated. Accordingly the authors, at Manchester Royal Infirmary, have studied this aspect of corticosteroid metabolism in ten control subjects and thirteen patients with rheumatoid arthritis and other connective tissue diseases of varying severity. Both patients and controls received a loading dose of 50 to 100 mg. cortisol daily for 3 days and the free cortisol content of the third day's 24-hour specimen of urine was estimated. All but three of the patients with connective tissue disease excreted significantly smaller quantities of free cortisol than did any of the controls and the average figure for the eleven patients showing no signs of hypercorticism was about 15 per cent. of the average for the control group.

The authors put forward the view that there are two possible explanations of their findings. There may be an increased binding of steroid by transcortin in patients with rheumatic disease; alternatively, there may be increased catabolism of cortisol due to an increased amount of inflammatory connective tissue, since fibroblasts have been shown to be capable of catabolizing cortisol.

[This is an important paper and should be read in full by those interested.] Oswalt Savage

Since their introduction in 1957 there has been a considerable increase in the use of saluretics and, with it, in the number of reported side-effects. Early reports indicated that these drugs increased the serum uric acid level and precipitated attacks of gout in those who are predisposed to this disease.

This paper from the Medical Clinic of the University of Zurich and the Cantonal Hospital, St. Gallen, Switzerland, reports a clinical study of the frequency of hyperuricaemia induced by these preparations and their influence on uric acid metabolism in which the serum uric acid concentration was estimated by Brown’s colorimetric method in 28 individuals with a normal metabolism, twenty patients with heart failure in the excretory phase of fluid retention, and 28 gouty patients before and after administration of chlorothiazide, hydrochlorothiazide, or cholthiolide. A significant rise in serum urate concentration occurred in 80 per cent. of cases and in only sixteen was there either negligible increase or a decrease. The patients with cardiac failure showed the least changes, the average serum uric acid levels rising from 5.9 to 7.1 mg. per 100 ml. The controls showed a somewhat greater rise (6.0 to 8.1 mg. per 100 ml.), but the greatest rise of all was noted in the gouty cases (7.9 to 11.1 mg. per 100 ml.).

Although the rise in serum uric acid level is clinically unimportant in most cases the risk that saluretics may induce an attack of gout in susceptible persons makes necessary the simultaneous administration of uricosuric drugs to such patients. The authors consider that saluretics decrease the urinary excretion of uric acid mainly by their influence on the tubular transport mechanism of the kidneys, but at the same time there may also be some complex extrarenal effect on uric acid metabolism. It is suggested that in certain circumstances these drugs might be used provocatively in establishing the diagnosis in atypical, latent gout. *D. Preiskel*


At the Pathological Institute of the Karl Marx University, Leipzig, the author carried out a histological study of subcutaneous nodules from six patients with rheumatoid arthritis and from another fifteen subjects who had apparently similar nodules, but no history or clinical signs of systemic or joint disease. The three anatomical zones characteristic of the rheumatic nodule were demonstrated—the fibrinoid and necrotic centre, the palisade predominantly of histiocytes, and the surrounding fibrous tissue. The last showed vascular proliferation, with lymphocytes and plasma cells surrounding the vessels, but no signs of arteritis. In addition, some nodules showed other, less characteristic zones, but all these features were found with equal frequency in the two groups. An extensive series of histochemical tests on the formalin-fixed tissues indicated the presence of carbohyrate, some in the form of mucopolysaccharide, of nuclear material, and of protein in the form of fibrin, as well as collagen. Collagenase was without effect on the fibrinoid substance, but trypsin caused its almost complete dissolution in 48 hours. Argyrophil fibrillar material was present in the necrotic nodule centres, as well as in the palisade layer. The author considers, like others, that fibrin is a constituent of fibrinoid, though not the only one. *G. Loewi*


Therapy


It is known that the release of ACTH can be suppressed by high blood levels of corticosteroids, although their site of action is controversial. Evidence is presented in this paper suggesting that their action may be exerted on the anterior pituitary.

Male white rats were injected subcutaneously with graded doses of dexamethasone acetate 16 hours before exposure to noxious stimuli. After killing, the adrenals were removed and corticosteroid production in vitro used as an index of ACTH activity. The corticotrophic effect of a strange environment was suppressed by 50 µg. dexamethasone, that of histamine phosphate by 125 µg., that of noise by 250 µg., and that of unilateral adrenalectomy by 500 µg. Adrenal response to ACTH was unaffected by pre-treatment with dexamethasone. The effect of lysine vasopressin on ACTH release diminished as increasing amounts of dexamethasone were given; complete block was obtained with 500 µg.

In further experiments rats with electrolyte lesions in the median eminence and adjacent areas of the hypothalami were used and their responses compared with those of sham-operated animals. The corticotrophic effect of lysine vasopressin and of extracts from the whole hypothalami of hypophysectomised rats was smaller in lesioned than in sham-operated rats, but was diminished in both by pre-treatment with dexamethasone. Animals treated with dexamethasone showed a tendency to reduced adrenal weight 16 hours later as compared with
controls. With lesioned rats the differences were not significant, but in intact animals adrenal weight was reduced at all dose levels and in sham-operated animals when more than 100 μg was given. The pituitary ACTH content was similar in all groups of rats and was not significantly altered by dexamethasone.

It is concluded that the anterior pituitary is the likely site of action of dexamethasone, since it suppresses the corticotrophic effects of lysine vasopressin and hypothalamic extract in rats with or without hypothalamic lesions. It does not seem to act by inhibiting ACTH synthesis since the adenohypophysal ACTH content is unaffected within 16 hours.

C. G. Beardwell


In the 5th week of pregnancy a woman developed cough and dyspnoea. At the beginning of the 5th month it was apparent that she had diffuse pulmonary sarcoidosis. Prednisone was given for 24 days at a mean dose of 55 mg a day. On the 24th day, after a 6-hour spontaneous labour, a 1-49 kg. child was born, who died 3½ days later from respiratory failure. The only lesion found was cystic degeneration and cell necrosis in the outer cortical zone of the adrenals. Adrenocortical failure as the cause of death was uncertain, as the maternal supply of prednisolone was expected to prove adequate for 20 hours after birth.

H. F. West


Writing from the Institute of Reconstructive Surgery in Sofia, Bulgaria, Dr. Ivan Matev describes his experience in the surgical treatment of long-standing traumatic “boutonnière deformity” of the finger due to rupture of the central slip of the extensor tendon.

During the past 4 years his practice has been to perform the method of reconstruction which is described and illustrated in detail.

The basis of the procedure is the division of both lateral bands, one near its insertion, the other 1 cm. proximal. The longer band is then crossed over and sutured to the other distal stump thus correcting the hyperextension of the terminal joint. The other is attached to the area of insertion of the damaged central slip.

A total of nine patients have been operated upon and correction of deformity was obtained in six. Three of these are illustrated and very good correction and range of movement shown. No patients with similar deformity due to rheumatoid arthritis are included in this series.

D. R. Sweetnam


Because of the increase in the number of chemically-modified adrenocorticosteroids, there is a great need for methods of predicting their efficiency. This study was undertaken to try to correlate their effect in animal and man, using their antiphlogistic effect, liver glycogen deposition, and thymus weight in rats, and eosinopenia, hyperglycaemia, and antirheumatic properties in man.

Thirty-one adrenocorticosteroids were investigated, being injected subcutaneously into the rats and given by mouth to the human beings. The potency estimate as suggested by liver glycogen deposition and thymus involution in the rats gave varying results, nor did either correlate well with clinical studies. On the other hand, the eosinopenic and hyperglycaemic assays show excellent agreement and correlate closely with anti-inflammatory potency as assessed in rheumatoid arthritic patients.

It is suggested that particularly the eosinopenic response may be a valuable method of a rapid estimation of relative anti-inflammatory potency of new steroids.

B. M. Ansell


The authors present the results of treatment of 142 cases of chronic inflammatory rheumatism with antimalarial drugs. Of these patients, 64 had received such drugs for less than 6 months and the remainder for periods up to 4 years. All the patients had characteristic clinical and radiological signs of inflammatory polyarthritis or disseminated lupus erythematosus. The drugs most commonly used were gentisate of chloroquine, hydroxychloroquine sulphate, and less often chloroquine sulphate. Many patients were also given small doses of acetylsalicylic acid.

The drugs were well tolerated in 102 cases; in the remainder the side-effects were mild and treatment had to be stopped in only twelve cases. The most frequent side-effects were epigastric pain and nausea; colic and diarrhoea occurred in a few cases. Reduction of the dosage by 30 per cent. relieved the side-effects in some cases; others were given another derivative of chloroquine. Several patients with peptic ulcer were able to take the drugs without ill effects, and although two patients developed gastric ulcer during treatment it was not established that antimalarial drugs were the causative factor. Vertigo, insomnia, and depression were invariably eliminated by a reduction in dosage. Skin reactions were negligible. One patient continued to take the drugs throughout pregnancy with no harmful effects to herself or to the infant. One patient developed optic neuritis after treatment with chloroquine for 6 months, but this condition improved when treatment was discontinued. The authors consider that the fundi should be examined annually in all cases of rheumatism under treatment with antimalarial drugs.

Of eighteen patients treated with antimalarial drugs alone, nine showed clinical improvement, which usually began after about one month of treatment. There was a recurrence of symptoms in five cases, though only after an interval of two years in one case. Gold therapy was given additionally in 23 cases, of which nineteen improved,
but in only eight of these was the improvement considered to be due to antimalarial drugs. Antimalarials were given to twenty patients under treatment with corticosteroids, and in nine of these it was possible to reduce the steroid dosage. In only one of four patients with disseminated lupus erythematosus was antimalarial therapy of value, the dosage of the associated steroid being progressively reduced during the 3 years of combined treatment.

The authors consider that while the results of treatment of chronic inflammatory rheumatism with antimalarial drugs were not constant nor immediate, these drugs were well tolerated and less dangerous than corticosteroids and are worthy of trial either alone or in combination with other forms of treatment. The best results were obtained in cases where the condition had been present for less than 5 years.

Deryck Thorpe


The author describes extensive experience at Copenhagen County Hospital, Hellerup, Denmark, over a period of 7½ years of the use of intra-articular injections of steroids, 5,278 patients receiving a total of 32,000 injections.

The preparation preferred was prednisolone tributyl acetate in a suspension of fine microcrystals, to which a local anaesthetic was added. A course of up to six injections was commonly given. The dose ranged from 5 mg. into a finger joint to 25 mg. into a knee and 40 or 50 mg. into a hip. Local reactions of mild transient pain were observed only three to four times per 1,000 injections, and no secondary infections followed.

A wide range of conditions were treated, the commonest being osteo-arthritis (2,833 cases), rheumatoid arthritis (826), periarthritis of the shoulder (909), and bursitis and tenosynovitis (133). Over 90 per cent. of these 4,701 patients were reported as “improved” (though no further details are given, nor is mention made of other forms of treatment such as rest or splinting). Some patients with gout, rheumatic fever, and ankylosing spondylitis also benefited from the treatment, injections in ankylosing spondylitis being given into the sacro-iliac joints. Fractures and dislocations were similarly treated with relief, but treatment for the former was limited to the relief of pain and swelling after adequate fixation in cases in which the radiograph already showed callus formation.

J. A. Cosh


The known efficacy and infrequent side-effects of intermittent corticosteroid therapy in renal and allergic diseases prompted the evaluation of such therapy in children with active rheumatoid arthritis. A group of fifteen patients with classic or definite juvenile rheumatoid arthritis attending the clinic of the Arkansas Crippled Children’s Service, Little Rock, were given 12 to 20 mg. triamcinolone daily for 7 out of each 12 days; in eight cases this regimen was changed to 3 out of 7 days each during the second years of treatment. At the end of the course of treatment, which lasted from 12 to 32 (mean 22) months, four patients were in “complete remission” (two had an accelerated erythrocyte sedimentation rate) and seven showed “major improvement”. Side-effects were mild, though symptomless osteoporosis of the vertebrae was almost invariable and most patients showed increased rheumatoid activity during the intervals when they received no treatment, particularly in the early months. Only in two prepubertal patients showing little improvement in the rheumatoid condition was growth markedly retarded. Changes in plasma 17-hydroxycorticosteroid levels after corticotrophin or pyrogen administration indicated impaired pituitary-adrenal function in seven of eight patients after 22 to 26 months of intermittent therapy. In the absence of controls the authors were unable to reach definite conclusions and suggest that controlled trials of intermittent adrenal corticosteroid therapy in juvenile rheumatoid arthritis should be carried out.

M. Wilkinson


The damage caused by aspirin and salicylates to the gastric mucosa has been attributed to an increased secretion of acid, but the evidence for this is conflicting, different workers having reported finding increased, unchanged, and diminished gastric acidity in man and animals after administration of the drugs. The authors of this paper from the University and St. Vincent’s Hospital, Sydney, have used denervated stomach pouch preparations in cats to study the effect of soluble and insoluble aspirin on the gastric secretion with and without maximal histamine stimulation. Aspirin in doses of 0·47 to 1·9 g. was dissolved or suspended in 15 ml. water and injected into the exposed, denervated stomach (or, in one group of animals, into the duodenum) after ligation of the pylorus. After 1½ hours a cannula was inserted into the stomach through an incision into the antrum, the stomach contents allowed to escape, and half-hourly collections of gastric juice made thereafter for measurement of volume and acidity. After 6 hours the animals were killed and the stomach and other viscera were examined for erosions and haemorrhages.

Blood was present in samples of gastric juice from 29 of the 33 animals given aspirin into the stomach or duodenum, the amount of bleeding being related to the degree of mucosal damage subsequently found. This consisted of acute “punched-out” erosions, flattening of the surface epithelium, and submucosal haemorrhages. In control animals given no aspirin no mucosal damage was found and the traces of blood found in occasional early specimens of gastric juice were attributable to bleeding from the site of cannulation. Other viscera were unaffected. Both the volume and acidity of the gastric juice were found to be significantly reduced by the intragastric injection of 1·9 g. insoluble aspirin in cats not given histamine. Similar reductions were found with all but the smallest dose of aspirin given intragastrically.
to cats which received a slow intravenous infusion of histamine so as to produce maximal stimulation throughout the experiment; the reduction in volume was less than in the unstimulated cats given the same dose of aspirin, but the same degree of ulceration and haemorrhage was found. The intraduodenal injection of aspirin (after ligation of the pylorus) also reduced the volume and acidity of the gastric juice despite maximal histamine stimulation. Insoluble aspirin given intragastrically had a greater inhibitory action than the soluble form.

Discussing the possible mechanism of gastric damage by aspirin the authors point out that as the stomach was the only viscus in which haemorrhage was found in their experiments a general bleeding diathesis caused by aspirin could not be responsible. An allergic reaction to aspirin is unlikely in animals never previously exposed to the drug, and idiosyncrasy to aspirin would affect only a minority of subjects. Although in some respects the effects of aspirin resemble those of adrenals, their effects on the stomach are completely dissimilar. They conclude that aspirin has a direct toxic action on gastric epithelium, whether the drug reaches the stomach from the lumen or through the circulation.

R. Hermon Dowling


At the Victoria Infirmary, Glasgow, the author has studied the effect of corticosteroid therapy in patients with normal and abnormal atrio-ventricular conduction. The group with normal conduction consisted of 25 patients with acute myocardial infarction who were given a 14-day course of oral prednisolone, the dosage decreasing from 30 mg. daily to nil over that period. In the group with abnormal conduction were 24 patients with acute heart block complicating a recent myocardial infarction and fourteen with chronic heart block (three partial and eleven complete). Of the 24 patients with acute block, seven were given oral prednisolone (maximal dosage 40 mg. daily, reducing progressively over 14 days after a high initial dose) or dexamethasone (2 mg. four times daily), while seventeen received hydrocortisone intravenously (10 mg. per kg. body weight in the first 24 hours, reducing progressively over the next 12 days). The fourteen patients with chronic heart block received either oral prednisolone, 30 mg. daily, or intravenous or intramuscular hydrocortisone, 100 to 600 mg. in 12 hours.

In patients with normal conduction, the mean P-R interval was 0.159 second before prednisolone treatment and 0.158 second after treatment had been stopped for 14 days. However, on the eighth day of treatment it was 0.148 second, which is significantly less than either before or after treatment. Of the 24 patients with heart block of recent onset, sinus rhythm was restored in six of the seven patients given oral therapy (the seventh patient died on the second day), the average duration of treatment before restoration of sinus rhythm being 6 days. Of the seventeen patients treated parenterally with hydrocortisone, sinus rhythm was restored in fifteen in the first 24 hours of treatment (the other two patients died within 3 hours); heart block did not recur after withdrawal of treatment and thirteen patients left hospital well. Neither intravenous nor oral corticosteroid therapy had any effect in nine of the fourteen patients with chronic heart block, but sinus rhythm was twice restored in one other patient during an intravenous infusion of hydrocortisone, only to revert to complete block each time despite oral therapy. Rhythm was unaffected but Stokes-Adams attacks ceased in three patients. In the remaining patient there was some shortening of the P-R interval during prednisolone treatment, but its duration (0-24 second) remained above the normal limit.

The authors suggest that the shortening effect of corticosteroids on the atrio-ventricular conduction time both in healthy subjects and in patients with chronic heart block is due to an alteration in the potassium balance, but in the case of recent infarction with heart block corticosteroids may have an anti-inflammatory effect on the disturbance in the conducting tissues, thereby promoting earlier recovery.

C. T. Dollery


The choice of corticotrophin or corticosteroids in treatment may be influenced by the possibility that the side-effects of the one may be more severe than those of the other. The authors have analysed in detail the number of side-effects, graded them in severity as mild, moderate, or severe, and sought to evaluate the possible causes of such side-effects in 110 patients with chronic rheumatoid arthritis receiving one of these forms of treatment. There were also 68 patients on a variety of corticosteroids and sixty on corticotrophin (eighteen patients received both).

In both groups moaning was the commonest side-effect, occurring in 79 out of the 110 patients. Bruising, dyspepsia, and moaning were most likely to reach severe proportions in patients on corticosteroids, whereas androgenic effects in the form of menstrual irregularities and acne were more likely to become severe in patients on corticotrophin. Severe degrees of oedema, hypertension, or emotional irritability developed in 5 per cent. of patients on corticosteroids, but in none of those on corticotrophin. Gastric symptoms occurred in 62 per cent. of those on corticosteroids and in 37 per cent. of those on corticotrophin, but in both groups it is emphasized that nearly all the patients were taking ancillary drugs capable of causing dyspepsia. Bruising was a frequent feature, often severe in patients on corticosteroid therapy. Osteoporosis leading to vertebral collapse was found in one patient on corticosteroids and in two patients receiving corticotrophin. Age had no bearing on side-effects, but the average number of side-effects per patient was higher in women than in men in both groups. Increasing dosage and increasing duration of treatment both predisposed to a higher incidence of side-effects. The study clearly showed that the likelihood of developing severe side-effects was three times higher with corticosteroid therapy, while mild or moderate side-effects were commoner in patients receiving corticotrophin.

M. J. Smith

During a period of 2 1/2 years 48 patients aged 29 to 72 years received treatment for peritendinitis of the shoulder joint at the San Juan Veterans Administration Hospital, Puerto Rico. Of the 24 patients who had experienced symptoms within 14 days of being treated seventeen received ultrasonic therapy. The sound head of the apparatus was applied to the tip of the shoulder for 10 minutes, at a frequency of 1,000 kc. per second at 2 watts per sq. cm. On occasion, however, a unit was used with a frequency of 1,000 kc. per second at 2 watts per sq. cm. for 8-7 sq. cm. During the acute phase the patients attended daily; subsequently they attended three times a week. Concurrent therapy consisted of exercises, manipulation, and local infra-red irradiation.

After ten ultrasonic applications sixteen patients showed pronounced diminution in the amount of calcification; in two cases calcification had disappeared completely. The findings were similar in a control group of seven patients who had placebo applications of ultrasound at 0 watt per sq. cm.; calcification was diminished in five and completely disappeared in one. Of 24 chronic cases, reduction of calcification after ultrasonic therapy was noted in only three. Among the treated and control cases no difference was observed either in the range of joint movement or in the time required for its complete recovery.

The author concludes that ultrasonic therapy exerts no appreciable effect in hastening diminution in the amount of calcification in peritendinitis calcarea of the shoulder joint. A. Garland


At the National Institutes of Health, Bethesda, Maryland, the antifolic agent methotrexate was administered to 21 patients with psoriatic arthritis. The series comprised eleven females and ten males aged 29 to 62 years with a history of psoriasis (2 to 49 years) and arthritis (6 months to 30 years). All patients had arthritis of the small joints of the hands; the spine and knees were affected in twelve and fifteen cases respectively. In a double-blind study ten patients were given methotrexate followed by a placebo and the order of treatment was reversed in the remaining cases. After tests for hypersensitivity patients were given three intravenous or intramuscular injections of 1 to 3 mg. per kg. body weight with intervals of 10 days between injections, but the scheduled dose was withheld when the leucocyte count fell below 4,000 per c.m.m. or the platelet count fell below 100,000 per c.m.m.

It was found that whereas the average area of skin affected by psoriasis was more than 46 per cent. before treatment, this had been reduced to 18 per cent. on completion of treatment. Pronounced improvement was observed after the second injection. The joints showed a decrease of about 2 to 3 per cent. in the deficit of range of movement, and a reduction in the erythrocyte sedimentation rate was also recorded. Side-effects included gastrointestinal symptoms (mainly anorexia and nausea) in sixteen cases and a burning sensation in the skin in ten. There were seven cases of leucopenia and four of disordered liver function. All side-effects were transitory. One patient, a man aged 39, died after an attack of haematemesis. Transitory leucopenia was observed before death, and though the fatality was not attributed to methotrexate therapy, the fact remains that death followed a profound reaction to the drug. Another patient died of cerebral thrombosis one month after completion of treatment.

Two patients who received 40 mg. methotrexate intramuscularly every 10 to 14 days for 6 to 8 months showed no recurrence of their symptoms. In seventeen cases treatment was suspended on completion of the study; skin and joint manifestations recurred in every case.

As yet the authors have not found sufficient evidence to support the contention that the course of psoriatic arthritis is altered by methotrexate treatment. A. Garland


After a brief review of the action of the folic acid antagonists the authors, from the National Institutes of Health, Bethesda, Maryland, report the results of the parenteral administration of methotrexate in 27 cases of psoriasis. In all the patients (21 male, six female) the condition was severe and had not responded to conventional therapy.

After standard haematological and clinical evaluation patients received an initial intravenous or intramuscular injection of 1 mg. methotrexate per kg. body weight, the dosage then being increased according to response. Out-patients received 5 to 175 mg. intramuscularly or intravenously every 7 to 14 days, while in-patients were given doses up to 450 mg. When improvement was obtained maintenance doses of 25 to 75 mg. injected intramuscularly every 7 to 14 days were found to be satisfactory. The results are summarized in a Table, according to which eighteen patients had 75 to 100 per cent. improvement, seven had 50 to 75 per cent. and, two had less than 50 per cent. Only transient side-effects were noted; these included leucopenia (four patients), thrombocytopenia (one), mouth ulcers (five), vomiting (four), erythema and burning of the skin (three), and hypersensitivity reactions (two).

The authors suggest that, in the parenteral administration of methotrexate, weekly or bi-weekly injections may be more safe and possibly more effective therapeutically than daily dose schedules; furthermore, they consider that parenteral treatment can be more easily controlled than oral therapy. They were unable to assess possible long-term effects of the drug. Benjamin Schwartz

The treatment of osteo-arthritis of the hip by the intra-articular injection of corticosteroid preparations has been widely practised in the past 10 years, and the introduction of television radioscopes has led to a new standard of accuracy. This method has been used by the author at the University Clinics of Frankfurt and Erlangen to give over 1,200 injections since September, 1960. [The number of patients treated is not stated.] The patients were mostly middle-aged or elderly, with an average age of 55 to 60 years. Ten of them had had either a displacement osteotomy or other operation without benefit; for 25 others locomotion was difficult and pain marked on account of congenital subluxation or total luxation of the hip, to which the technique of injection had to be specially adapted.

In general, injections were given once a week, the aim being to get the needle into the joint space or, failing that, into the capsular space. The first cases in the series received prednisolone acetate, 200 mg., in 4 ml.; later a suspension of dexamethasone triacetate crystals was used in a dose of 60 to 80 mg. per injection, and in the most recent cases a suspension of methylprednisolone acetate crystals, 80 mg. in 2 ml. In the author’s experience the best results are obtained with a crystalline suspension concentrated in a small volume. The lateral approach over the great trochanter allowed visualization of the joint space, which was usually reached directly without difficulty with slow infiltration of the needle track with 5 ml. of 1 per cent. local anaesthetic. A few patients complained of increased pain after the injection, particularly with the crystalline suspension of methyl prednisolone, but this was in no way affected the eventual improvement, which was merely delayed 2 or 3 days in such cases.

Systemic manifestations due to the steroid were negligible and adrenal function was not affected by the injections. Almost all the patients experienced subjective improvement, with demonstrable objective improvement in joint function. The duration of the improvement varied from patient to patient; the longest relief obtained after two to three injections was 2 years and the shortest 4 to 5 weeks. The author considers that relief is more certain in cases in which the joint space can be easily visualized and entered. In order to avoid disappointment, the patient should be warned of the likelihood of increased pain for a few days after the injection.

D. Prestel


Since the report by Dameshek and Schwartz of the successful use of purine antagonists in autoimmune diseases (Trans. Ass. Amer. Physcs, 1960, 73, 113) the present authors, at the Walter Reed Army Institute of Research and the George Washington University School of Medicine, Washington, D.C., have evaluated the effect of 6-thioguanine in nineteen patients with autoimmune and related diseases. These included systemic lupus erythematosus (five patients, with improvement in three), scleroderma (two patients, with no improvement), dermatomyositis and necrotizing angiitis (one patient each, with some remission), atopic dermatitis (with remission in three out of four patients), neurodermatitis (no remission in four patients), and psoriasis (repeated remission in two patients). The results in two other patients with hyperglobulinaemia purpura have already been reported (New Engl. J. Med., 1963, 268, 753).

The dosage of 6-thioguanine was 1 mg. per kg. body weight administered as 50-mg. tablets daily with meals for 2 weeks, followed by a rest period of 1 to 2 weeks. The serum γ-globulin level was measured before and after treatment: a significant decrease (greater than 25 per cent. in this level occurred in four of eight patients with hyperglobulinaemia. Delayed cutaneous hypersensitivity tests with common skin allergens in thioguanine-treated patients showed no significant change when compared with those of control subjects receiving a placebo. Toxicity attributed to the drug was seen in five of the nineteen patients, particularly in those with systemic lupus erythematosus. Because of this toxicity, which was mainly shown by depression of bone marrow with leukopenia, the authors are unable to recommend the routine use of this drug; only patients with severe disease generally unresponsive to conventional therapy have so far been studied and further evaluation is needed.

Detailed reports are given of three illustrative cases—of systemic lupus erythematosus and an acquired haemolytic anaemia, necrotizing angitis, and atopic dermatitis respectively.

E. G. L. Bywaters


The author describes three children, who after prolonged treatment with chloroquine (lasting 2 to 4 years, total dose 230-390 g.) developed severe irreversible retinopathy. The basic pathology was polyarthritis, a disease which has never been linked with retinal changes. It is assumed that the affection is a side-effect of the drug, the nucleus of which is quinolin; this is also present in quinine and optoquine, both with well-known injurious effects upon the visual neuro-epithelium.

L. Wittels


A review of some of the ocular manifestations induced by chloroquine, as well as a report of the experimental production of chloroquine keratopathy and retinopathy in albino rats.

P. Henkind

Three cases of retinal changes as a result of chloroquine therapy are described. The changes are irreversible.

C. McCulloch


A description of the symptoms and signs occurring during intensive chloroquine treatment with reports of three cases.

D. F. Cole


There has been some suspicion that the use of corticosteroids may cause a temporary or permanent glaucoma. Two patients, aged 35 and 54, showed a rise in intraocular pressure associated with the use of steroids.

Howard Coverdale


A man aged 50 years had been taking two to three corticosteroid tablets per day for 10 years for rheumatoid arthritis. One eye was lost from chronic iritis with secondary glaucoma. The other eye has 6/5 vision but a small posterior cortical cataract.

Ronald Lowe


The authors discuss the merits of therapy with aspirin, phenylbutazone, gold salts (in particular sodium autotriopropionan sulphonate), chloroquine, hydroxycloquoine, and corticosteroids. They mention in particular the frequency of skin eruptions with chrysanthaphy, and of ocular lesions resulting from the use of the chloroquine. They consider prednisone and prednisolone to remain the steroids of choice, despite the occasional occurrence of osteoporosis.

Gold or chloroquine therapy and never steroids should be used in the first 2 to 3 years of the illness. Proprietary mixtures of several substances are condemned. The authors consider that corticotherapy may be responsible in part for polyneuritis in rheumatoid arthritis; they mention two cases of undoubted polyarthritis nodosa, in which lesions of the central nervous system arose during attempted treatment with corticosteroids.

There are short notes on the occurrence of amyloidosis, the use of parenteral steroids, the prognosis in mild cases of rheumatoid arthritis, and on the serious risks of using phenacetin, contained in more than forty proprietary products, some of which can be obtained in France without a prescription.

W. T. Menke


Other General Subjects


This abridged version of the speech given by the President of the Arthritis and Rheumatism Council at the opening of the new Rheumatism Research Wing at the University of Birmingham is an admirable account of the progress of the speciality of rheumatology in Great Britain. It gives some historical background of the "Report on Rheumatic Diseases" in 1924 from the
Ministry of Health; of the opening of the first special clinic for rheumatic diseases by the British Red Cross in 1930; and of the setting up of a Committee to study this group of diseases, by the Royal College of Physicians of London in 1933. The establishment of the *Annals of Rheumatic Diseases* in 1944 stemmed from the published reports of this Committee.

The various facets of rheumatism research, many of them financed by the Arthritis and Rheumatism Council, are discussed. The population surveys carried out in Lancashire and Wensleydale; the discovery that rheumatic fever was associated with the group A-haemolytic streptococcus; and the present wide spectrum of research projects in rheumatoid arthritis and osteo-arthritis.

[This is a fine review of a subject fascinating to anyone interested in this group of conditions and should be read in the original.]

**Oswald Savage**


The author describes a single patient suffering from the rare condition of recurrent dislocation of the elbow joint.

The first dislocation occurred in a fall at the age of 8 years. Reduction was performed under general anaesthesia, but at almost yearly intervals thereafter the condition recurred and on each occasion the violence required to produce dislocation became less. Reduction, other than on the first occasion, was always simple and was performed by the patient himself.

Clinical examination revealed no more than some laxity of the collateral ligaments of the elbow joint, but radiographs revealed a defect in the semilunar notch of the ulnar, an avulsion fracture of the lateral epicondylo, and an enlarged head of the radius. These radiological findings are stated to be usual in this condition.

No treatment was advised but 3 years after the first attendance no further dislocation had occurred.

**D. R. Sweetnam**


This case report concerns a 64-year-old man with rheumatoid arthritis who was admitted to hospital in acute respiratory distress of sudden onset, following a respiratory infection and pleurisy. Bronchoscopy was performed at which time the vocal cords and epiglottis were seen to be swollen. The bronchi were filled with thick tenacious secretions which were removed. Tracheostomy was performed and the respiratory distress was relieved. On the second hospital day an attempt to remove the tracheostomy tube resulted in immediate development of severe stridor, dyspnoea, and cyanosis, which was relieved by re-inserting the tube. On the 11th hospital day direct laryngoscopy revealed swollen, red, immobile arytenoids with the true vocal cords fixed in abduction producing laryngeal obstruction. A left arytenoidectomy relieved the obstruction.

The authors stress the importance of correct diagnosis of cricoarytenoid arthritis in a patient with rheumatoid arthritis developing stridor, dyspnoea, or atypical asthma.

**D. D. McCarthy**


Morquio-Ullrich disease, first described as an entity in 1954, is characterized by the radiological skeletal stigmata of Morquio-Brailsford disease together with some of the extra-skeletal anomalies of Hurler’s disease, namely, corneal opacities, hepato-splenomegaly, Reilly granulations in the leucocytes, and the urinary excretion of large amounts of mucopolysaccharide. However, in each of the three cases described, the mucopolysaccharide found in largest quantity was keratosulphate, whereas in Hurler’s disease chondroitin sulphate B or heparin monosulphate predominated, with no keratosulphate. The importance of the biochemical findings in the differential diagnosis of this condition is stressed.

**A. Garner**


A man aged 57, who had had nodular rheumatoid arthritis for 15 years, developed repeated febrile bronchitis and was found to have massive splenomegaly. Investigation showed marked granulopnia, with some decrease of red cell and platelet counts. There was myeloid hyperplasia in the bone marrow.

Because of abdominal discomfort and repeated and intractable infections, the spleen was removed. Thereafter infections ceased, the blood count became normal, and the joint inflammation abated a little. The improvement persisted for the 16 months of follow-up, except that the granulocytes gradually decreased again.

The nature and clinical aspects of Felty’s syndrome are discussed in some detail.

**M. R. Jeffrey**

**Value of the Synovial Ragocyte in the Diagnosis of Rheumatic Diseases.** (Le ragocyte synovial. Son intérêt pour le diagnostic des maladies rhumatismales.) DELBARRE, F., KAHAH, A., AMOR, B., and KRASSINE, G. (1964). *Presse méd.*, 72, 2129. 9 figs, 4 refs.

At the National Institute of Hygiene, Paris, the authors have studied the cells present in centrifuged deposits of various specimens of synovial fluid, with particular regard to the presence of what they call “ragocytes”—cells containing granules looking like grape seeds. These granules are seen mainly in leucocytes, but sometimes also in monocytes, and consist of round, well defined masses of a pale green or olive green colour disposed irregularly in the cytoplasm. Occasional free granules are found, suggesting that they have been liberated from the leucocytes. The pale granules contrast strongly with the deeply stained nucleus when fresh material is stained by Dienes’s method; with May-Grunwald-Giemsma staining the granules appear as vacuoles.

No synovial ragocytes were found in cases of degenerative arthritis in which the Waaler-Rose and latex-fixation reactions were negative in both synovial fluid and serum. On the other hand they were found in all but one of 29 cases of rheumatoid arthritis, being rather more numerous in the fourteen in which the Waaler-Rose and latex reactions were positive in both serum and synovial fluid than in the fourteen in which the reactions were negative or doubtful. Occasional positive results were obtained...

A comparative study of the radiological findings in 169 cases of psoriatic arthropathy and 100 cases of rheumatoid arthritis is reported in this paper from University Central Hospital, Helsinki, and the Rheumatism Foundation Hospital, Heinola, Finland, the object being to determine whether there was a radiological picture which could be considered diagnostic of psoriatic arthropathy.

Certain features favour a diagnosis of psoriatic arthropathy—for instance, in this condition the sex incidence is equal, whereas in rheumatoid arthritis there is a female preponderance of 2:1. In the present series joint lesions preceded skin lesions in about one-quarter of the psoriatic cases—a finding which might lead to confusion in diagnosis. Involvement of the distal joints of the fingers and/or the interphalangeal joints of the lateral toes, either alone or in combination with other joint lesions, was more common (44 per cent.) than in rheumatoid arthritis (16 per cent.). Clinical manifestations were unaccompanied by joint changes in 12 per cent. of the former, but in only 3 per cent. of the cases of rheumatoid arthritis. Severe osteo-arthritis was seen only in psoriatic arthritis, a finding which, the authors state, may be of some diagnostic importance.

On the other hand osteoporosis, although on the whole less severe, was not observed very much less frequently in psoriatic arthropathy than in rheumatoid arthritis. The authors did not find that erosions were more common in the former than in the rheumatoid cases, but in the latter they were more extensive. Lesions of the ulnar styloid process, the spine, and the sacro-iliac joints, which were well recognized in rheumatoid arthritis, did occur, though admittedly less often, in psoriatic arthropathy. Erosions of the interphalangeal joints of the great toes were found with equal frequency in both conditions, while severe cases of ankylosis and osteolysis were rare in both.

Apart from the distal localization of the joint lesions in psoriatic arthropathy, which is usually recognizable clinically and accompanied by nail lesions, the authors were unable to identify any radiological picture characteristic of this condition and conclude that this form of investigation cannot by itself be considered as diagnostic or convincing.

R. O. Murray

Seasonal Variation of Adrenal Cortex Activity. WATA-NABE, GEN-ICHE (1964). *Arch. environm. Hlth*, 9, 192, 10 figs, 19 refs.

Physiological activity in human beings is affected by environment and seasonal variations, the most important of which is probably atmospheric temperature. It has been considered by some that hot and cold climates would have opposite effects on the body, but the author of this paper from the University of Niigata School of Medicine, Japan, expected that both extremes of climate would cause stress and would act in contrast to mild conditions. Accordingly he has investigated the activity of the adrenal cortex of healthy young adults throughout the year at Niigata City, where the mean dry-bulb monthly temperature at noon has varied from 35° to 80° F. (1-7° to 26-7° C.) over the past 5 years. Blood and urine samples were taken monthly, the times and conditions of collection being standardized. The circulating eosinophils, small-sized normal lymphocytes, and Type-II lymphocytes were counted and the urinary corticoid and blood hydroxy-corticosteroid levels measured, these being factors indicating adrenal cortical activity.

The circulating eosinophil count decreased maximally during January and August and rose to a peak level in April and November. The lymphatic index—that is, the ratio of large Type-II lymphocytes to small normal lymphocytes—was increased in both the coldest and the hottest months, also indicating reaction to stress. Urinary 17-ketosteroid excretion (assayed by the method of Holtorff and Koch (*J. biol. Chem.*, 1940, 135, 377)) and urinary 17-hydroxy-corticosteroid excretion (assayed by the method of Glenn and Nelson (*J. clin. Endocr.*, 1953, 13, 91)) both showed highest levels in the winter with some increase in hot weather compared to those during seasons of moderate weather. Blood levels of hydroxy-corticosteroids were measured according to the method of Nelson and Samuels (*J. clin. Endocr.*, 1952, 12, 512) at 2-monthly intervals for 14 months in twenty young males; blood from four subjects was pooled and analysed to minimize the errors incurred at low levels. There was again a clear diphasic seasonal variation, indicating greatest adrenal cortical activity during extremes of temperature and decreased activity in mild seasons.

The author points out that this study was carried out in a city where extremes of temperature occur suddenly; the effects would probably not be so marked in places where changes in temperature are more gradual and allow time for acclimatization.

Nancy Gough

Felty's syndrome (consisting of chronic polyarthritis, enlarged spleen, and leucopenia) was until recently considered to be a rare condition, only seventy cases being reported between 1924, when Felty first described it, and 1958. Since then, however, with the rapid development of rheumatology, it has been recognized more frequently, and by 1960 the number of cases reported in the world literature had grown to 125. The position of this syndrome in the nomenclature of the rheumatic diseases has been much debated, and as a contribution to its elucidation the present author reports the findings in six cases (five certain, one probable) studied at the District Hospital, Dresden-Friedrichstad, in all of which the classic triad was present.

In all five certain cases of Felty's syndrome serological evidence was found of the presence not only of the anti-γ-globulin (rheumatoid) factor, but also, and with equal regularity, of the antinuclear factor. This finding rules out the theory that chronic sepsis is the underlying cause of the condition. But the findings are also a strong argument against Felty's syndrome being a variant of rheumatoid arthritis, since L.E.-cells are relatively rare in the latter (10 to 20 per cent.), whereas in this series they were present as frequently as in visceral lupus erythematosus (70 to 90 per cent.). The possible relation of the syndrome to lupus erythematosus is not invalidated by the presence of the rheumatoid factor, for that may be found in up to 50 per cent. of cases of visceral lupus erythematosus. Besides, two of the chief clinical signs of Felty's syndrome, leucopenia and enlarged spleen, are rare in rheumatoid arthritis but suggestive of lupus erythematosus. Moreover, in visceral lupus erythematosus there is marked and characteristic periarterial lamellar fibrosis in the spleen, and a similar condition was found in two of the author's cases of Felty's syndrome in which the spleen was examined histologically.

The author concludes that there seems little doubt on clinical, serological, and anatomical grounds that Felty's syndrome is actually a form of visceral lupus erythematosus. The common factor between this condition and rheumatoid arthritis is probably an autoimmune mechanism which in the latter is predominantly confined to joint tissues, whereas in visceral lupus erythematosus it is more or less generalized and affects other organs as well.

**D. Preiskel**


Description of a case of a 22-year-old man who for many years had been treated unsuccessfully for a unilateral recurrent hypopyon uveitis associated with aphthous stomatitis, ulcers of the genito-anal region, and erythema nodosum-like skin changes of the legs. The eye was excised and on histological examination showed chronic fibroplastic endophthalmitis. The case is regarded as one of Behçet's syndrome, and from the hypersensitivity to the Mantoux test, strongly positive Kahn reaction (on one occasion), and culture of haemolytic *Staph. aureus* in the blood (on several occasions), as well as from the pathological appearance of the enculcated eyeball (mainly lymphocytic infiltration, an allergy to some infectious agent is postulated as the aetiological background. No viruses could be isolated from the eye. **L. Wittels**


Benign "Essential" Back Pain in the Young Adult. (Dorsalgies bénignes de l'adulte jeune, dites essentielles.) **ALBOUY, R.,** **BENICHOU, C.,** **CHOURAKI, L.,** and **SOLAL, C.** (1964). *Presse méd.,* 72, 2515. 7 refs.


Some frequently Unrecognized or Unappreciated Manifestations of Rheumatoid Disease. (Algunas manifestaciones de la enfermedad reumatoidea frecuentemente no reconocidas o apreciadas.) **FREYBERG, R. H.,** **EHRLICH, G.,** and **BIENENSTOCK, H.** (1964). *Rev. méd. Chile,* 92, 176. 2 refs.


Contribution to the Study of Thyroid Function in Rheumatoid Arthritis and the Relationship between Hashimoto's Disease and Rheumatoid Arthritis. (Contribution à l'étude de la fonction thyroïdienne au cours de la polyarthrite chronique évolutive (P.C.E.) et des relations entre la maladie de Hashimoto et la P.C.E.) **LUPU, N. G.,** **BÁLÁCEANU, M.,** **NICULESCO-ZINCA, D.,** **CIOBANU, V.,** and **STAN, M.** (1964). *Rev. roum. Méd. int.,* 1, 19. 4 figs, 12 refs.