# Abstracts

These abstracts have been specially commissioned for this Journal. Many of the titles have been taken from Abstracts of World Medicine and Ophthalmic Literature, published by the British Medical Association, and the references to these sources are given. The subjects are arranged in the following sub-sections:

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### Rheumatic Fever


**Primary Prevention in Rheumatic Fever of Schoolchildren in Jerusalem. III. Screening for Heart Disease by Means of the PhonocardioScan** Halfon, S. T., Brand-Auraban, A., Szabo, A. M., Rogel, S., Perez, A., Ever-Hadani, P., and Davies, A. M. (1970) Israel J. med. Sci., 6, 584 2 figs, 8 refs


### Rheumatoid Arthritis


The population of Sudbury totals 6,000 and is mainly under 50 years of age. In this survey 77 per cent. of all residents between the ages of 15 and 75 years were questioned and examined for the presence of rheumatoid arthritis, and blood was tested for rheumatoid factor. The American Rheumatism Association (ARA) and the New York (NY) criteria were used as a basis for the recognition of rheumatoid arthritis.

A total of 3·8 per cent. of women and 1·3 per cent. of men showed three or more of the ARA criteria, i.e. had probable or definite rheumatoid arthritis; the majority were over 45 years of age. These figures are similar to those given by other surveys in North America. But by the stricter NY criteria, a total of only sixteen individuals, again mostly over 45 years of age, had rheumatoid arthritis (0·55 per cent. of women and 0·14 per cent. of men).

The striking difference between these figures is due to the three ARA criteria of morning stiffness, joint tenderness or pain on motion, and soft tissue swelling: these alone would suffice for the diagnosis of 'probable rheumatoid arthritis' yet could be accounted for by the presence of degenerative joint disease in older subjects. The NY criteria are much more specific, and require among other things symmetrical involvement in hands, wrists, or feet, radiological erosions and positive serology for rheumatoid factor; they exclude specifically certain features which could be due to degenerative joint disease.

J. A. CosH
Study of the Relation of Sero-negative and Sero-positive Rheumatoid Arthritis to Each Other and to Necrotizing Vasculitis


The 136 patients in this cross-sectional study included all those with rheumatoid arthritis attending the arthritis clinic of the University of Rochester Medical Center during a 2-month period, together with a number [unspecified] of private patients on whom immunological studies were done during this time. Most patients had well-established disease, judged from radiographs taken of 99 of the 136 patients and varying in duration from 1 to 31 years [few clinical details are given]: Negroes and patients with coexisting bacterial infections were excluded. Eleven of the patients with direct evidence of vasculitis were studied as a separate group. In all patients the serum immunoglobulin levels, anti-nuclear antibodies, and complement were estimated; anti-IgG globulins were determined by the latex flocculation test.

It was found that 29 patients were latex-negative and 107 latex-positive. Latex-positive patients had significant elevation of all three classes of immunoglobulins, whereas in latex-negative patients only IgG and IgM were raised. The eglobulin levels were appreciably higher and complement levels fractionally lower in latex-positive than in latex-negative patients. The frequency distribution of latex flocculation titres showed a nadir at the 20 to 40 dilutions, which was thought to indicate that the latex-negative and latex-positive groups represented different populations. There was no clear relationship between age and latex titres in the positive group. Fifteen patients, two being sero-negative, gave positive antinuclear antibody tests; this factor showed no correlation with any of the other factors studied. Various other intra-group correlations were studied. Two sero-negative patients had subcutaneous nodules; of the eleven patients with vasculitis all were sero-positive and ten had nodules, compared with 39 of 96 sero-positive patients without vasculitis. Patients with vasculitis had more severe disease, more frequent proteinuria, and lower serum complement levels than the other groups. The finding that complement titres were relatively lower in sero-positive patients was thought possibly to be due to the deposition of complement-fixing immune complexes in various sites; other studies showing relatively higher levels of complement in patients with rheumatoid arthritis are quoted [but the disparity is unexplained].

A. J. POPERT

Rheumatoid Arthritis terminating in Plasmacytoma


Three patients with rheumatoid arthritis and myeloma-tosis seen at the University Hospital, Helsinki, are reported, together with details of two others found in the records of the Rheumatism Foundation Hospital, Heinola. Joint x rays in all five cases were said to show typical destructive changes of rheumatoid arthritis, and in three the Waaler-Rose titre was raised. Secondary amyloid infiltration was not found in the synovial membrane in two patients who came to autopsy, although in one of these amyloid was present in lymph nodes, spleen, and kidney.

In all cases, at varying intervals following the diagnosis of rheumatoid arthritis, monoclonal paraprotein peaks were detected on electrophoresis, plasma cells were increased in the bone marrow, and in three there was radiological evidence of myeloma deposits.

The authors state that in four cases the activity of the joint disease decreased once the myelomatosis became apparent, although in three it would appear that this might be related to the cytostatic treatment given. In one patient the titre of rheumatoid factor fell progressively to normal levels. It is adduced that these data are evidence that plasma cell diseases are likely to complicate rheuma-toid arthritis where there is protracted irritation of the immune system.

ERIC HAMILTON

Neuromuscular Disorders in Rheumatoid Arthritis.

A Motor-point Muscle Biopsy Study


(See Abstr. Wld Med. (1970), 44, 918)

The Anaemia of Rheumatoid Arthritis: the Significance of Iron Deposits in the Synovial Membrane


(See Abstr. Wld Med. (1970), 44, 918)

Observations on the Symptoms and Signs of ‘Early’ Rheumatoid Arthritis in a Prospective Study

[In English]


(See Abstr. Wld Med. (1970), 44, 917)

Radiographic and Clinical Survey of the Hip Joint in Sero-Positive Rheumatoid Arthritis


Radiological Study of the Sacroiliac Joints in Sero-negative Rheumatoid Arthritis


Synovial Lesions in the Adult Hip Joint in Rheumatoid Arthritis

WESTON, W. J. (1970) Acta radiol. (Stockh.) 10, 326 5 figs, 12 refs

Rheumatoid Vasculitis


Abdominal Apoplexy in Rheumatoid Arthritis


Rheumatoid Arthritis with Pulmonary Shadows in a Patient with Silicosis: Caplan’s Syndrome


Stills' disease

(See Abstr. Wild Med. (1970) 44, 712)

(See Abstr. Wild Med. (1971), 45, 58)


Osteoarthritis


Spondylitis

(See Abstr. Wild Med. (1970) 44, 853)

Inflammatory Bowel Disease in Ankylosing Spondylitis JAYSON, M. I. V., SALMON, P. R., and HARRISON, W. J. (1970) Gut, 11, 506 5 figs, 26 refs
(See Abstr. Wild Med. (1970) 44, 919)


Aortic Valve Replacement in Patients with Severe Aortic Valve Incompetence associated with Rheumatoid Spondylitis SPANGLES, R. D., McCALLISTER, B. D., and MCGOON, D. C. (1970) Amer. J. Cardiol., 26, 130 28 refs


Gout


Six areas in the City of New Haven were selected; the 2,389 people living there, fairly equally distributed by socio-economic class, constituted the population sample. An initial home interview was completed in 92 per cent. of the probands, but only 63 per cent. (1,436) underwent physical examination and the final completion rate was only 29 per cent. (679). The results of the survey are therefore not representative of the general population.

The factors studied were these: sex, age, social class, height, weight, haemoglobin; serum proteins and serum uric acid (modified Folin method) were determined by Auto Analyzer. Taking the sexes separately, the uric acid level showed significant correlation with age, haemoglobin, weight, and ponderal index (height (in.)/cube root of weight (lb.)), and with total protein in women. In the sample as a whole, uric acid showed associations not with social class but with sex, haemoglobin, and physique.

Stepwise regression analyses were undertaken to identify which indices of physique and which protein fractions were the best predictors of serum uric acid.
These showed several differences between the sexes, particularly in that weight and ponderal index showed higher correlations with uric acid in women than in men. In men the best predictors of serum uric acid, in order of importance, were: ponderal index, age, haemoglobin, and total serum protein; in women they were weight, age, total serum protein, and haemoglobin. The absence of association between uric acid and socioeconomic status was thought to reflect the absence of poverty in the study population. 

A. J. POPERT

Reduction of Serum Uric Acid in Young Men during Physical Training


Previous studies have shown that short-term acute exercise tends to raise the serum urate roughly in proportion to the intensity of the exercise. In the present study the effect of 8 weeks of physical training upon the serum urate was investigated in three groups of college students, classified as athletic, moderately active, and sedentary. In contrast to the findings with acute exercise, the serum urate tended to fall in all groups, particularly the first, the members of which underwent a much more strenuous training programme than the others. The mean figures were: athletic group 6.5 to 5.2 mg./100 ml. (P < 0.05), moderately active 6.4 to 6.0 mg./100 ml. (n.s.), sedentary group 5.6 to 5.2 mg./100 ml. (n.s.).

J. T. SCOTT

Effects of Allopurinol and Oxipurinol on Purine Synthesis in Cultured Human Cells


The inhibition of uric acid synthesis induced by allopurinol was originally attributed to inhibition of xanthine oxidase, the enzyme responsible for the conversion of hypoxanthine to uric acid via xanthine. That this was not the complete explanation of the action of allopurinol was indicated by the lack of agreement between the fall in uric acid excretion and the simultaneous rise in urinary xanthine and hypoxanthine. The present work from the Division of Metabolic and Genetic Diseases, Duke University, N. Carolina, describes the studies on alternate mechanisms of allopurinol activity with special reference to its inhibitory effect on the de novo synthesis of purines.

The synthesis of purines was studied in vitro on tissue cultures of human skin fibroblasts. These were shown to lack xanthine oxidase, and any inhibitory effect of allopurinol on de novo purine synthesis must therefore be attributed to some other mechanism. Purine synthesis was measured by the formation of formylglycinamidate ribonucleotide from 14C formate and this was inhibited by 60 per cent. at a concentration of 2 × 104 mole/litre. The mechanism of this inhibition in the absence of xanthine oxidase is obscure, but is in part due to the conversion of allopurinol to its ribonucleotide which leads to depletion of phosphoribosyl pyrophosphate (PRPP) a participant in the rate-limiting step of purine synthesis, namely PRPP amido transferase. Since large doses of allopurinol can inhibit purine synthesis even in the absence of phosphoribosyl transferase, and a similar inhibition is shown by oxipurinol which is not a substrate for this transferase, it would appear that still other pathways are available for the inhibitory action on purine synthesis.

L. E. GLYNN

Crystal-induced Inflammation of the Joints


Natural History of Gout

(Pour servir à l'histoire naturelle de la goutte) RYCKEWAERT, A., AUDEVAL, B., KUNTZ, D., and SÈZE, S. de (1970) Rev. Rhum., 37, 543 6 figs, 7 refs

Total Heart Block as a Complication of Gout

VIRTANEN and HALONEN (1969) Cardiologia (Basel), 54, 359

Thalassemia and Gouty Arthritis


Effect of MK-185 on Some Aspects of Uric Acid Metabolism


Behavioral and Physiological Characteristics in Hyperuricemia


Serum Uric Acid and Cholesterol in Achievement Behavior and Motivation. Part II

KASL et al. (1970) J. Amer. med. Ass., 213, 1291

Observations on the Distribution of Serum Uric Acid Levels in Participants of the Tecumseh, Michigan, Community Health Studies


High Urinary Pyrophosphate Excretion in the Acute Phase of Pseudogout


Dietary Protein Level and Uric Acid Metabolism in Normal Man


Automated Enzymatic Spectrophotometric Method for the Determination of Uric Acid


Effect of Some Uricosuric and Anti-Inflammatory Drugs on the Binding of Uric Acid to Human Serum Albumin in vitro


Effect of Drugs on the Binding of Urate to Human Albumin


Effect of Glycine Loading on Plasma and Urinary Uric Acid and Amino Acids in Normal and Gouty Subjects


Allopurinol: Alteration in Pyridimine Metabolism in Man Kelley and Beardmore 1970 Science, 199, 388


Lesch-Nyhan Syndrome: Preventive Control by Prenatal Diagnosis Boyle et al. 1970 Science, 169, 688


Other forms of arthritis


This paper is a report on the response of rabbits to the intracocular inoculation of a bedsonia agent isolated from the synovium of a patient with Reiter's syndrome. The study is one of several on the same subject carried out at the Proctor Foundation for Research in Ophthalmology and the George William Hooper Foundation, University of California, San Francisco. 10^6 egg lethal doses were instilled into either the conjunctiva or the anterior chamber, and 10^4 and 10^3 doses into the chamber only. No detectable eye changes were found after conjunctival inoculation, but one animal developed an acute arthritis in a single joint; the agent was recovered from eyes, liver, and lungs. Intracamerai injection produced ocular disease (conjunctivitis, iritis, and corneal opacity): seven out of eight times with 10^4 ELD_50, four out of six with 10^5 ELD_50, and one out of six with 10^6 ELD_50. Two animals injected with 10^4 ELD_50 developed arthritis. On a small number of attempts the agent was recovered from eyes, liver, a joint, and a spleen. P. D. Byers


Six children considered on histological grounds to be suffering from sarcoidosis complicated by arthritis are reported in detail. The onset of symptoms in all patients was early, being within the first year of life in four of them. The specific features consisted of boggy synovial swelling, often gross, which was painless and with little limitation of movement; there were frequent tendon sheath effusions. Characteristic skin changes were frequent either before or after joint symptoms developed, and uveitis occurred in all patients usually after the development of joint symptoms. Four had ‘typical’ sarcoid granulomas; in two of these and one other, band keratopathy also developed.

The problem in differentiating this from juvenile rheumatoid arthritis is discussed; it is noted that the incidence of swelling was much more than would be expected in rheumatoid disease, as was the absence of pain. In particular, juvenile rheumatoid disease in young children, i.e. between 1 and 3 years, is usually accompanied by marked constitutional symptoms; these children, however, had none. In addition, despite prolonged extensive synovitis, radiological evidence of erosions or osteoporosis had not developed. In some patients, with the passage of time, the joints and tendon sheath effusions became less distinctive clinically and loss of movement and morning stiffness did occur. Corticosteroid therapy appeared partially to suppress the disease in all the treated patients.

The authors speculate that, in very young children, when sarcoidosis does occur it almost always involves the joints, skin, and eyes, less frequently the liver, kidneys, and salivary glands, and only rarely the lung. They suggest that sarcoidosis in young children is probably more common than is indicated by the reported incidence, because of the lack of the classic findings of sarcoidosis; the value of biopsy in allowing a confident diagnosis to be made is stressed.

B. M. Ansell


This report from the departments of rheumatology and orthopaedics, University of Vermont, describes the musculoskeletal symptoms in eleven patients with laboratory-proven hypothyroidism in whom other causes of rheumatic complaints had been excluded. All had evidence of clinical hypothyroidism due to spontaneous myxedema and in all cases the musculoskeletal symptoms included gross weakness, stiffness, arthralgia, and swelling. Joint pain and carpal-tunnel compression symptoms were noted by some patients. Clinical signs included marked synovial thickening with joint effusions, usually affecting the knees, hands, and feet. The synovial fluid showed increased viscosity but no other abnormality. Laboratory findings included a raised erythrocyte sedimentation rate (8) and a raised serum uric acid level (4), the latter possibly related to the associated impairment in renal function. Radiographs showed osteoporosis but no specific signs, although three patients had an unusual collapse of the tibial plateau.

The onset was insidious and occurred before, simultaneously with, or after the onset of the overt hypothyroidism. Complete remission occurred in every case after the institution of replacement therapy. The endocrinological basis for the symptoms is discussed and it is suggested that excessive deposition of hyaluronic acid in connective tissue may be responsible.

A. G. Mowat


Aetiology of Transient Synovitis of the Hip in Childhood
(See Abstr. Wild Med. (1970), 44, 788)

Psychiatric Aspects of Behcet’s Syndrome
(See Abstr. Wild Med. (1970), 44, 925)

Topics in Clinical Medicine: Epidemiological Considerations in Reiter’s Syndrome

Popliteal Cysts in Children

Para-osteo-arthropathies occurring in Tetanus
LES para-ostéo-arthropathies au cours du tétanos)

Varicella Arthritis

Acute Septic Arthritis complicating Crohn’s Disease

Charcot Joints

Subacute Inflammatory Rheumatism in Secondary Syphilis
(Le rhumatisme inflammatoire subaigu de la syphilis secondaire)

Gonococcal Arthritis complicating Gonorrheal Pharyngitis

Bone disease
Renal Osteodystrophy in Patients on Chronic Haemodialysis. A Radiological Study
(See Abstr. Wild Med. (1970), 44, 723)

Chondrodysplastic Rheumatism
(Le rhumatisme chondrodysplasique)
(See Abstr. Wild Med. (1970), 44, 916)

Parathyroid Activity and Postmenopausal Osteoporosis

Primary Hyperparathyroidism in Children. Brief Review of the Literature and a Case Report. [In English]

Osteitis Pubis in a Rheumatological Setting


Osteoporosis in Rheumatoid Arthritis

Intraepiphyseal Gas in Osteochondritis

Non-articular rheumatism

Prognosis in Sciatica

This survey is a retrospective study of the 583 patients suffering from unilateral sciatica who attended the Department of Orthopaedic Surgery at the Karolinska Institutet between 1955 and 1961. Only those patients displaying a 5th lumbar and/or 1st sacral nerve root lesion and whose symptoms had been present for less than 6 months were included. There was a preponderance of males (2:1) with a peak age at onset during the fourth decade; 7 per cent. of the men were manual workers.

A comparison is made between those 166 patients treated by surgery and the remaining 417 treated conservatively by immobilization. Though in general the prognosis is good in both groups, the operated patients returned to work more quickly. A long-term follow-up (mean 7.4 years) was possible in 468 patients. This showed that, by most criteria, there was little to choose between the operated and non-operated groups. However, the recurrence rate and the number of patients requiring to be registered as disabled was higher in the non-operated group.

This is a valuable contribution to the literature of disc lesions.
R. GRAHAME

‘Lumbar Disc Syndrome’ produced by Sacral Metastases

Three case reports from the Toronto Western Hospital, Canada, are used to illustrate the diagnosis of sacral metastases mimicking lumbar disc protrusion. Features favoring metastases include an older age group, very severe back pain with sciatica and urinary retention, perianal anaesthesia, absent anal reflexes, and a raised erythrocyte sedimentation rate. Two patients showed a raised cerebrospinal fluid protein, but radiological signs were minimal and appeared late.
M. WILKINSON

Polymyalgia Rheumatica and Temporal Arteritis


Connective tissue studies


This paper, from the Departments of Pathology and Orthopaedic Surgery of the University of Saskatchewan, reports the light and electron microscopic changes produced in fifteen rabbit synovia after the intra-articular injection of a homogenate of rabbit omental fat. The steps taken to free the homogenate from cell derivatives, microsomes, enzymes, etc., apart from 'lipid' are not given. The homogenate was prepared after 30 min centrifugation at 2,500 r.p.m. ['G' is not stated]. The experimental condition studied is, of course, not identical with traumatic lipourthrosis, in which an inflammatory reaction is usually conspicuous.

Injected lipid was identified as fine droplets by its oil red-O positivity in synovial cells where it was at a maximum after 4 days, and, less abundantly, in cells of the subsynovial tissue. Electron microscopically, after 1 and 18 hours, few synovial cells contained lipid droplets; after 3 days, membrane-bounded droplets were common; they were not found in Golgi or in micropinocytotic vesicles. Abnormally numerous filopodia were seen on surface cells. After 7 days, the lipid content of the synovia was again almost normal.

The experiments detail the physical location of lipid droplets at defined time intervals after sterile intraarticular injection; they throw no light, the authors say, on the mechanisms by which synovial cells take up such material or on the mysterious process by which lipids pass cell membranes. [To the reviewer, perhaps the most interesting aspect of this study is the sluggish reaction of the synovia to (syngeneic) lipid or lipoprotein, and the absence of inflammation.] D. L. GARDNER

(See Abstr. Wild Med. (1970), 44, 918)


Pararheumatic (collagen) disease


A patient is described who had had an episode of nephritis in childhood, and who, at the age of 25 years, developed weakness, fever, lymphadenopathy, hepatomegaly, and leucopenia diagnosed as Hodgkin’s disease by biopsy of a lymph node. She was treated with nitrogen mustard and prednisone with clinical improvement. Subsequently features of the nephritic syndrome appeared, and persistent amenorrhoea and galactorrhea and loss of hair followed a postpartum haemorrhage.

2 years later she was re-investigated, and the same clinical features were observed, together with splenic enlargement, thickening of the interphalangeal joints, and ulnar deviation of the fingers. Investigation revealed a haemoglobin of 7.2 g./100 ml., positive direct and indirect Coomb’s tests, albuminuria and pyuria, hypoalbuminaemia, hypergammaglobulinaemia, and positive LE-cell preparations and antinuclear factor tests. On review of the lymph node biopsy, the diagnosis of Hodgkin’s disease was dropped, and a renal biopsy was ‘compatible with lupus erythematosus’. The patient then developed acute thyroiditis with tracheal compression, which resolved with high dosage corticosteroid therapy. An antithyroglobulin test was subsequently strongly positive.

2 years later, while continuing corticosteroid therapy, galactorrhea ceased and normal menstrual function returned.

A diagnosis of SLE with joint, renal, hepatic, and splenic involvement was made, together with an autoimmune thyroiditis and the Chiari-Frommel syndrome
(postpartum amenorrhoea and galactorrhoea). The relationship of the latter syndrome with SLE is discussed; it is thought to be possibly due to a vasculitis of the pituitary stalk which responded to corticosteroid therapy.

C. G. BARNES


In this report from the Montefiore Hospital, New York, the results of oesophageal manometry are compared with those of barium radiography in 27 patients with positive skin biopsies for systemic sclerosis. Oesophagograms, taken with the patient in both upright and recumbent positions, were normal in eighteen cases and absence of peristaltic activity was observed in only three patients. Manometry, on the other hand, showed abnormal features in all but six patients, and complete absence of motor activity in the distal oesophagus in seven. From these results it is concluded that manometry is the more sensitive indicator of oesophageal dysfunction, with the corollary that a normal barium oesophagogram does not necessarily exclude sclerodermal involvement.

A. GARNER


This is a case report with some general comments from the Hospital of the University of Pennsylvania, Allen-town. A 21-year-old female experienced dysphagia and only 6 months later had neck, shoulder, and hip weakness. X-ray showed abnormal oesophageal and gastric peristalsis, oesophageal dilatation, megaduodenum, and saclullations of the colon. Muscle biopsy was reported to be consistent with dermatomyositis. She improved on dexamethasone 12 mg./day. 9 months later gastrointestinal motility was still abnormal, although other parameters showed no abnormalities at this time. The author comments that the gastrointestinal complications of dermatomyositis include regurgitation of oesophageal or gastric contents with subsequent tracheal aspiration. Upper gastrointestinal haemorrhage from mucosal ulcerations may occur even without steroid therapy.

G. LOEWI


(See *Abstr. Wid Med.* (1970), 44, 920)


(See *Abstr. Wid Med.* (1970), 44, 745)


(See *Abstr. Wid Med.* (1970), 44, 823)


(See *Abstr. Wid Med.* (1970), 44, 920)


Coexistence of Lupus Erythematosus and Scleroderma in Light of Immunopathological Investigations [In English] CHORZELSKI, T., and JABLONSKA, S. (1970) *Acta dermat.-venereol.* (Stockh.), 50, 81 5 figs, 24 refs


Australian Antigen, Virus Hepatitis, and Polyarteritis Nodosa (Antigène australien, hépatite à virus et périvasculite noueuse) TREPO, C., and THIVOLET, J. (1970) *Presse méd.*, 78, 1575 8 refs

Lupus Erythematosus BURCH, P. R. J., and ROWELL, N. R. (1970) *Acta derm.-venereol.* (Stockh.), 50, 293 4 figs, 21 refs


Immunofluorescent ‘Band’ Test for Lupus Erythematosus BURNHAM et al. (1970) *Arch. Derm.*, 102, 42

Antigens to Ribosomal Ribonucleic Acid in Patients with Systemic Lupus Erythematosus LAMON, E. W., and BENNETT, J. C. (1970) Immunology, 19, 439 2 figs, 17 refs


Immunology and serology


Studies on Nuclear Staining by the Fluorescent Antibody Method. I. Non immunological Factors leading to Nuclear Fluorescence BRUCHHAUSEN et al. (1970) Immunology, 19, 1

Anti-globulin Antibodies detecting Hidden Gamma G Antigens: Characterization of the ‘Pepsin Site’ by Different Immune Antiserum LITTLE (1970) Immunology, 19, 511


Biochemical Studies


In vivo Synthesis of IgG by Rheumatoid Synovium


Serum Iron and Copper Level in Patients with Rheumatoid Arthritis [in Polish] KEDRACKA, J. (1970) Reumatologia (Warsz.), 8, 115 1 fig, 10 refs


Therapy


Equally good results but fewer side-effects from alternate-day corticosteroid treatment have been found in conditions such as bronchial asthma and ulcerative colitis. The author has, therefore, treated all his patients with lupus nephritis in a similar way and presents the case histories of six of them.

An alternate morning dose of 100-120 mg. prednisone was used. Studies of renal function and renal biopsies were performed before and during treatment. When histological improvement was seen, the dose of prednisone was reduced at a rate of 5 to 10 mg. every other morning per month.

All six patients' biopsies showed histological improvement within 6 to 10 months of starting treatment, four patients had a well-maintained increase in creatinine clearance, and in three the amount of urinary protein decreased.

The period of follow-up in the six patients is from 14 to 30 months. One patient has remained well after the steroids have been stopped and the remaining five are taking between 5 and 60 mg. prednisone on alternate mornings. Two patients developed herpes zoster and all but one showed an increase in blood pressure while on high doses.

MARY CORBETT


The rise in plasma level of 11-hydroxycorticoids (11-OHCS) after certain stressful stimuli may be used to assess the functional capacity of the pituitary-adrenal system. Amongst the stimuli used are insulin hypoglycaemia and parenteral injection of lysine-vasopressin (LVP). This study from the Centre for Rheumatic Diseases, Glasgow, sought to compare the results obtained with these two stimuli in 47 patients with rheumatoid arthritis: 25 on long-term (9 months to 9 years) treatment with corticosteroids and 22 who had never received such treatment.

The LVP was given in a dose of 10 units, either intravenously or intramuscularly, and plasma levels of 11-OHCS were determined before injection and after 60 and 120 minutes. After intramuscular injection the response was at its greatest at 60 minutes but after intravenous injection the level was often higher at 120 minutes. A further advantage of the intramuscular route is the less frequent incidence of unpleasant side-effects.

The reproducibility of the results was extremely good with both methods of administration. The results indicate that for the intravenous test a normal level at 60 minutes should exceed 14-7 µg./100 ml. and 12-2 µg./100 ml. at 120 minutes, with an increment of at least 8 µg. at either time interval. The corresponding levels in the intramuscular test should be 15 µg./100 ml. at 60 minutes with an increment at this time of not less than 4 µg./100 ml. The results with the insulin hypoglycaemia test did not differ significantly and the authors therefore conclude that for reliability, simplicity, and lack of side-effects the intramuscular LVP test is better.

L. E. GLYNN


This paper from Ulleval Hospital, Oslo, describes the use of azathioprine in the treatment of a patient with Wegener's granulomatosis. The patient was a 26-year-old female in whom the diagnosis was substantiated by percutaneous renal and muscle biopsies. Treatment with azathioprine 2 mg./kg. and prednisone 80 mg./day was started when her clinical condition deteriorated rapidly with signs of widespread granulomatous lesions in the lungs, muscles, and kidneys. The blood urea was 273 mg./100 ml. and the patient was anuric. For the first 5 weeks after starting treatment daily peritoneal dialysis and intravenous feeding were necessary. Thereafter a
steady improvement was noted and, at the time of this report, the patient was alive and well but with moderate impairment of renal function. She tolerated the drugs well. The dosage of azathioprine was monitored by weekly blood counts.

The authors comment on recent favourable reports of the use of azathioprine and corticosteroids in the treatment of Wegener’s granulomatosis. This patient was in an advanced state of renal failure at the start of treatment and has a good remission for over one year.

A. VIRGINIA CAMP

Treatment of Persistent Knee Effusions with Intrarticular Radioactive Gold

The authors, at the Toronto East General Hospital, selected the following sixteen patients: rheumatoid arthritis, 10; intermittent hydrarthrosis, 3; ankyllosing spondylitis, 2; undetermined synovitis 1 (chronic knee effusions unresponsive to the usual treatment). These patients were given intrarticular doses of colloidal radioactive gold (198Au), from 4 to 8 mc. according to the size of the effusion. At the end of one year the effusion had disappeared from twelve knees. The dosimetry of the procedure is discussed in detail. Escape of radioactivity from the knee cavity varied from 0 to 37 per cent, implying the possibility of radiation damage to the regional lymph nodes (not thought to be of danger) and even to the testicles in men. Further radioactivity accumulated in the pelvic lymph nodes. Practical and theoretical tests showed that the hazard to the gonads was minimal. Nevertheless, the authors recommend a preliminary tracer dose of gold to determine the percentage escape of radioactivity in any particular joint.

A. ST. J. DIXON

Renal Papillary Necrosis

The author, from the Department of Urology, University of Kentucky, presents four case histories of patients in whom acute renal papillary necrosis led to renal failure by obstruction of the ureters by renal debris. Retrograde pyelography demonstrated the ureteral obstruction in all cases, and in three out of four patients recognizable renal papillary tissue was removed at cystoscopy. The papillary necrosis was associated with renal infection and prostatic obstruction in one patient, and with urinary infection in two diabetics. The fourth patient, a sufferer from migraine, had taken a phenacetin-containing preparation over a long period of time and had presented with severe left ‘flank’ pain and anaemia for which a blood transfusion was given. After 3 weeks, the blood urea had risen from 30 to 122 mg./100 ml. and the patient appeared ill and had right ‘flank’ pain with Proteus bacilluria.

The patients were treated with bilateral ureteral catheterization and lavage accompanied by hydration and antibiotics, and recovered of good renal function. The case histories serve as a reminder of the importance of recognizing ureteral obstruction as a cause of oliguric renal failure.

R. N. MAINI

Prednisolone Treatment of Lupus Nephritis: Effect of High Doses on Course of Disease, Renal Function, Histological Lesions, and Immunological Reactions


Fistula of the Thoracic Duct as Immunosuppressive Treatment in Rheumatoid Arthritis [In English]


Use of Azathioprine in Refractory Idiopathic Thrombocytopenic Purpura in Children [In English]


Reactions to Total Dose Infusion of Iron Dextran in Rheumatoid Arthritis


Clofibrate, Serum Enzymes and Muscle Pain


Treatment of Lupus Nephritis with Cyclophosphamide CAMERON et al. (1970) Lancet, 2, 846


Results of the Medical Treatment of Sciatica due to Disc Herniation (Résultats du traitement médical des sciatiques par hernie discale) SAPORTA, L., LAVRARD, J.-P., and MASSIAS, P. (1970) Rev. Rhum., 37, 439 3 refs


Rehabilitation of the 'Crash Course' of Steroids in Rheumatology (Réhabilitation de l'assaut cortisonique en rhumatologie) ARET, J., PUOL, M., and CARLES, P. (1970) Rev. Rhum., 37, 477 1 fig., 7 refs


Some Practical Details concerning Thermal Techniques at Aix-les-Bains (Quelques détails d'application pratique relatifs aux techniques thermales d'Aix-les-Bains) FRANÇON, F. (1970) Rhumatologie, 22, 83


Surgery


The author has compared the clinical results with a radiological assessment in a series of intertrochanteric osteotomies (15 patients) and hanging-hip operations (23 patients). Joints were x-rayed before operation and
at intervals postoperatively for up to 7 years. The degree of improvement after operation was judged radiologically by the extent of increase of joint interval, decrease of subchondral sclerosis of the femoral head, disappearance of subchondral cysts, etc. The author points out that the increase in joint space frequently seen immediately after operation may be accounted for by the altered position of the femoral head following operation. This may allow a rim of residual articular cartilage to come into contact with the roof of the acetabulum. To overcome this problem of an apparent widening of the joint interval, joints were x-rayed in the neutral position, in maximum adduction, and in maximum abduction. Three-quarters of the patients showed improvement in the radiological appearance and this was paralleled by their clinical progress. Although a few patients had an acceptable postoperative result with no change in the appearance, a poor clinical result was usually accompanied by radiological deterioration.

R. A. STOCKWELL


This paper describes a 10-year study of arthroplasty of the knee using a stainless steel mould between the denuded femoral condyles and tibial plateaux with preservation of the ligaments when possible.

The indications are stated as severe crippling pain, swelling, and deformity which cannot be relieved by other methods or procedures. The decision to use the prosthesis is made at operation after synovectomy and assessment of the state of the joint surfaces.

Careful pre- and postoperative treatment is described, including preparatory surgery for bone cysts and flexion deformity.

The series studied comprised 55 patients of whom seven had bilateral operations. 54 operations were undertaken after rheumatoid arthritis (47 women). The duration of symptoms was mostly more than 20 years and most of the patients came to operation between 40 and 60 years of age.

After operation there were thirteen wound infections causing three ankyloses, three arthrodeses, and three removals of the prosthesis; two limbs were amputated.

Of the remaining joints more than half were painless at all times, and a further quarter had only occasional aches. Less than half the joints had an increased range of movement, and one-quarter had diminished movement. Most joints had less swelling and were more stable.

As may be expected when synovectomy is part of the operation, the operated-upon joints were spared in any subsequent disease 'flare-up'.

J. V. JEFFS


Value of Synovectomy (Wert der Synovektomie) GSCHEWEND, N. (1970) Z. Rheumaforsch., 29, 129 6 figs, 3 refs


Other general subjects


This case report from the Johns Hopkins Hospital describes a 49-year-old man with respiratory and cardiac failure due to long-standing severe kyphoscoliosis. An impressive improvement in respiratory function resulted from traction applied to the spine by the halo-femoral method. A metal 'halo' was attached to the cranium by pins, and other pins were fixed through the lower end of the femora; the spine was distracted by the attachment of weights pulling cranially and caudally respectively, ultimately increased to 15 lb. in each direction. With the resultant improvement in shape in the thoracic cage, arterial O2 tension rose and CO2 tension fell, with relief of dyspnoea, indicating the potentially reversible nature of respiratory failure due to anatomical causes. However, the vital capacity was only slightly improved.

Unfortunately, an attempt to perpetuate the distraction of the spine by spinal grafting and internal splinting was unsuccessful and the patient died.

J. A. COSH


Findings in the Locomotor System in Patients with Ulcerative Colitis (Befunde am Bewegungsapparat bei Kranken mit ulzeröser Kolitis) VITULOVÁ, V., and POLČÁK, J. (1970) Z. Gastroen. 8, 217 2 figs, 29 refs


Systemic Amyloidosis complicating Dermatoses BROWNSTEIN and HELWIG (1970) Arch. Derm., 102, 1


