

In dealing with such a mass of material, the editorial committee had to face the problem of classification without too much overlapping. Authors, for very good reasons, may call their paper "Low back pain" or "Lombalgia" and so it is only reasonable to find cervicobrachial and sciatic pain described both in the chapter on degenerative rheumatism (Chapter V) and in that on non-articular rheumatism (Chapter VII). The 349 pages are divided into nine chapters and sub-chapters, and the attempt at classification appears, on the whole, to have been successful. The difficulty of keeping a sense of balance under the circumstances is understandable but a word of criticism may be introduced here. In the sub-chapter on "Acroparaesthesia", for example, we are introduced to a mysterious state called the menopause, which, in this context at least, means only that the lady in question has suffered wear and tear. The concluding advice to the reader is worded as follows: "Il faut retenir que l'acropaesthésie douloureuse nocturne paraît être l'expression, comme beaucoup de syndromes paroxystiques humains, de troubles essentiellement fonctionnels dont l'éclosion se fait ici sur terrain nerveux et de congestion veineuse surtout". Now French has always been regarded as the language

of diplomacy (which often means circumlocution), but why go to such lengths to avoid mentioning the carpal tunnel syndrome? In contrast, "Caplan's syndrome", a much rarer occurrence, finds a place of honour.

The Bibliography contains some 3,000 references, arranged at the end of each chapter. Although a Table of Contents is provided there is no Index, which is a pity.

DAVID PREISKEL

#### A Osteo-Artrite do Joelho (Osteo-Arthritis of the Knee).

By Jacques Houli. 1956. Pp. 407, 60 figs. Companhia Brasileira de Artes Graficas, Rio de Janeiro.

This book covers everything one wants to know about osteo-arthritis of the knee. As is usual in the South American publications there is a full review of international opinion on each aspect of the subject under discussion. It is a pity, however, to find so many printing errors, especially in such important items as percentages, etc. There are ample illustrations and photographs and the bibliography is complete. This work was presented as a thesis for a chair of medicine in the University of Brazil, and as the author was successful the assessors must have thought highly of his effort.

PAUL B. WOOLLEY

## HEBERDEN SOCIETY

**Clinical Meeting.**—At a meeting held on December 13 and 14, 1957, at the Wellcome Foundation, the following papers were presented:

**Ulcerative Colitis and Arthritis.** By B. M. Ansell and E. G. L. Bywaters (*London*): All cases of definite ulcerative colitis attending Hammersmith Hospital and the Canadian Red Cross Hospital, Taplow, over the last 10 to 11 years have been reviewed for the presence of arthritis. The overall incidence of this complication appeared to be 15 per cent. 37 cases of arthritis with proved ulcerative colitis derived from this source and from cases seen at the Central Middlesex and West Middlesex Hospitals have been studied very closely.

The knee and ankle joints were most frequently involved and, in contrast to rheumatoid arthritis, the hand and tarsal joints were much less frequently affected. There was a relatively high incidence of sacro-iliac involvement, and of particular value diagnostically was the swelling of the proximal and distal phalangeal joints of the toes.

In most cases the arthritis was that of a recurrent mild synovitis, gross changes being found in only four cases, only two of which were typical of rheumatoid arthritis with nodule formation and a positive differential agglutination test.

The Rose test was repeated on a number of occasions in 29 patients; 25 were persistently negative, the two already cited persistently positive, and two others positive on one occasion only.

Eight of the 37 cases had erythema nodosum and this might occur early in the course of their disease or with an exacerbation. In seven of these the arthritis was present at the time of the erythema nodosum, and in one of these pericarditis was also seen.

On the basis of the frequency of the arthritis, its course and pattern, joint distribution, frequent association with erythema nodosum, and negative differential agglutination test, it is suggested that this is a separate arthritis from rheumatoid arthritis, either caused by the factor that produces the gut lesion or secondary to it. If it is indeed rheumatoid arthritis it has been considerably modified by the presence of ulcerative colitis.

**Rheumatoid Family Survey.** By J. S. Lawrence (*Manchester*): Parents, siblings, and children over 15 years of age of persons found to have either clinical rheumatoid arthritis or a positive sheep cell agglutination test in population studies at Leigh, Lancs., were submitted to a clinical and radiological examination and had blood taken for a sheep cell agglutination test, and the findings were analysed\*.

**Rheumatoid Arthritis of the Cervical Spine.** By J. Sharp, D. W. Purser, and J. S. Lawrence (*Manchester*): When x rays of the cervical spine of patients aged 55-64 years, who were suffering from rheumatoid arthritis, were compared with those of individuals in this age group selected at random from the general population, the

\* To be published in full in the next issue of this Journal.

features indicative of rheumatoid arthritis appeared to be narrowing of multiple disks, particularly the upper two, with relatively little osteophytosis of the vertebral bodies and a tendency to erosions rather than sclerosis of the adjacent plates, vertebral subluxation, particularly when occurring through narrowed disks or at multiple levels, and erosion of apophyseal joints.

Using these features as criteria, 427 radiographs taken from random samples of the general population in the age group 55-64 years were examined in an effort to recognize the subjects suffering from rheumatoid arthritis. The films were read without knowledge of the clinical or serological findings or of the radiological findings elsewhere.

The prevalence of these changes was found to be 6 per cent. in males and 7 per cent. in females in whom the changes tended to be more severe. On comparison with other criteria of rheumatoid arthritis in the population sample, it was found that the cervical changes were significantly associated with positive sheep cell agglutination tests and also with radiological changes of rheumatoid arthritis in the hands or feet but only poorly correlated with rheumatoid arthritis as diagnosed clinically. Both clinical rheumatoid arthritis and radiological changes of the disease in the hands or feet, however, showed a very significant association with positive sheep cell tests.

These findings suggest that in the general population a form of the disease may be encountered mainly or exclusively involving the spine, which is not diagnosed clinically as rheumatoid arthritis in the absence of changes of rheumatoid arthritis in peripheral joints. This form of the disease may be important in studies of the prevalence of rheumatoid arthritis in populations where it may account for some apparently "false" positive results in the sheep cell agglutination test.

In clinical practice, rheumatoid involvement of the cervical spine is important both on account of the associated pain, which may be severe, and the resultant mechanical instability which may result in severe cord damage.

**Pathology of the Rheumatoid Cervical Spine.** By J. Ball (*Manchester*): A characteristic feature of the intervertebral disks of the cervical spine is the presence of a synovial joint—the neuro-central joint—adjacent to their lateral borders. In a *post-mortem* study of twenty cervical spines from typical cases of rheumatoid arthritis (not selected on clinical or radiological grounds) neuro-central arthritis was found in all but one of the eighteen cases in which this area was examined; apophyseal joints were involved in nineteen; in neither was there a preferred site of involvement.

Disk lesions were frequently encountered, mainly in the postero-lateral and antero-lateral parts of the annulus and also along the disk-bone border in these regions. Serial sections indicated that the lesions were extensions of pannus arising in the roof or the anterior or posterior recesses of the neuro-central joint. In the affected area the annulus was replaced by granulation tissue varying in appearance according to the degree of maturation; the occurrence of bone in the postero-lateral part of the

annulus may represent a quiescent stage of a rheumatoid erosion and may be found in association with bony ankylosis of the corresponding neuro-central joint.

Atlanto-axial dislocation was found in three cases. Dislocation at the first, second, or third disk occurred in five cases, and in each instance there was associated erosion of the disk annulus posteriorly, anteriorly, or in both sites. Appreciable disk erosion is not necessarily accompanied by subluxation; occasionally this could be accounted for by ankylosis of the corresponding apophyseal or neuro-central joint.

In the single case in which dislocation was severe enough to cause compression of the cord, it was noted that some degree of fixation was present above and below the level of dislocation, mainly because of ankylosis of apophyseal joints.

The disk lesions found in the rheumatoid cases were not encountered in the cervical spines of twelve elderly subjects considered not to have suffered from polyarthritis. It was also noted that, whereas in the control cases disk narrowing and osteophytosis were predominantly located at the fourth and fifth disks, in the rheumatoid cases disk narrowing when present showed no such predilection for the lower disks and was often unaccompanied by conspicuous osteophytosis.

**An Operation to relieve Thoracic Rigidity in Ankylosing Spondylitis.** By C. E. Drew (*London*): A 55-year-old male suffering from a rigid thoracic cage following ankylosing spondylitis was referred by Dr. C. Foster Cooper. The patient complained of increasing dyspnoea which was now extreme and suffered repeated pulmonary infections. Respiratory function tests performed by Dr. L. H. Capel showed Vital Capacity=1,175 ml., one second FEV=1,175 ml.

The operation, which was carried out in two stages, consisted of the subperiosteal resection of  $\frac{3}{4}$ -in. rib segments posteriorly on both sides through incisions parallel to the spine. At the first stage segments were removed from ribs 1 to 5 and muscle placed between the rib ends. There were no post-operative complications. The improvement in pulmonary ventilation was immediate, accompanied by some return of ability to rotate the head and neck, which had been previously fixed.

Four months later the second stage was carried out, removing segments from ribs 6 to 10. On this occasion no muscle was placed between the rib ends. There was no immediate benefit, possibly because of interference with the fixed attachments of the diaphragm, but 18 months after the first operation the immediate improvement after the first stage had been maintained (Vital Capacity=1,920 ml., one second FEV=1,510 ml.). The patient had gained 3 stones in weight, and could walk for nearly a mile without dyspnoea; there was an upper chest expansion of  $1\frac{1}{2}$  in., and the head and neck movement was maintained. X-ray examination showed refusion of the lower ribs, but no fusion in the upper five ribs on each side.

**Heart Lesions in Rheumatoid Disease.** By B. Cruickshank (*Glasgow*): Previous workers have described a

variety of non-specific cardiac lesions in patients suffering from rheumatoid disease and the occurrence of rheumatoid granulomata in the heart is a well-recognized, though rare, occurrence. Most of the non-specific lesions have been regarded as of rheumatic aetiology. The whole picture is complicated by the inclusion of examples of ankylosing spondylitis in several of the previous series.

Heart lesions, other than those attributable to some other disease, have been studied in 100 patients suffering from rheumatoid disease. Rheumatoid granulomata were found in the mitral and aortic rings and cusps in five patients and in the myocardium in one of these. Active rheumatic heart disease was seen once and healed rheumatic endocarditis in five patients, in two of whom no histological examination was made. Non-specific chronic endocarditis was seen in nine patients. Although the macroscopic appearances suggested rheumatic endocarditis, microscopic examination failed to reveal characteristic lesions of that disease. In four of these patients the inflammation was active and diffuse, with many of the features found in rheumatoid lesions elsewhere in the body, though necrosis was absent. These are regarded as further examples of rheumatoid endocarditis. The other cardiac lesions encountered were myocarditis (10 patients), arteritis (20 patients), and pericarditis (15 patients), all of which occurred in a higher proportion of those admitted to hospital for treatment of rheumatoid disease than in those admitted for treatment of intercurrent disease. Many of these patients had extensive involvement of tissues other than the joints.

The incidence of rheumatic heart disease was no higher than in unselected autopsy series. It is considered that rheumatic fever plays no significant part in causing the cardiac lesions of rheumatoid disease and that many of these lesions are part of the rheumatoid process itself.

**Aortic Lesion of Ankylosing Spondylitis.** By E. G. L. Bywaters, B. M. Ansell, and I. Doniach (*London*): The aortic lesion of ankylosing spondylitis has been described by Clark, Kulka, and Bauer, in the U.S.A., but not in Great Britain. Two cases were found in a survey of 212 cases of ankylosing spondylitis followed to the present by Wilkinson and Bywaters. In one of these the disease started at the age of 22 with peripheral joint symptoms, later iritis and backache, sacro-iliac changes, and a rigid spine. The Rose test was negative and the erythrocyte sedimentation rate was raised. After 12 years, aortic incompetence developed with left ventricular enlargement and a prolonged P.R. interval. The Wasserman reaction, Kahn test, treponemal immobilization test, and Price precipitation reaction were all negative.

The second case was of a similar nature developing after 8 years. The patient died of heart failure, and a *post-mortem* examination revealed gross scarring resembling that caused by syphilis in the aorta down to the origin of the renal arteries, as well as valvular disease and incompetence. Again all serological tests for syphilis were negative.

**Observations of Plasma Ascorbic Acid, Plasma Dehydroascorbic Acid, and Plasma Caeruloplasmin in Rheumatoid Arthritis.** By Malcolm Thompson (*Newcastle-upon-Tyne*): Using a modification of the method of Roe and Keuther, estimations were made of plasma ascorbic acid (A.A.) and plasma dehydroascorbic acid (D.H.A.) levels in a series of patients suffering from rheumatoid arthritis, a series of healthy controls, and a group of patients suffering from various diseases. The results confirmed earlier observations that significantly low plasma ascorbic acid levels are found in rheumatoid arthritis. The values for plasma dehydroascorbic acid and the ratio D.H.A./D.H.A.+A.A. were shown to be within constant limits in normal subjects. The abnormalities found in rheumatoid subjects were compared with those found in patients with other diseases, especially inflammatory and neoplastic disorders and vitamin deficiency states. The results of short-term and long-term administration of ascorbic acid to patients suffering from rheumatoid arthritis were described and considered in respect of elevation of the plasma levels of ascorbic and dehydroascorbic acid, correction of the A.A./D.H.A. ratio, and effects upon the course of the illness and disease activity.

In view of work indicating that the metallo-enzyme caeruloplasmin was responsible for the oxidation of ascorbic to dehydroascorbic acid, estimations of plasma caeruloplasmin levels were made (using a method described by Scheinberg) in rheumatoid subjects, healthy controls, and patients suffering from various other diseases. Again, the normal range of plasma levels was defined and the significance of raised values found in rheumatoid subjects was considered in relation to the plasma levels found in those with various other disorders. The relationship between raised plasma levels of caeruloplasmin and abnormalities of ascorbic acid metabolism in rheumatoid arthritis was also studied. The effects of administering ascorbic acid and steroid compounds upon the plasma caeruloplasmin levels and upon capillary resistance were described and compared.

**Further Work on the Anti-Nuclear Serum Factor in Connective Tissue Disease.** By E. J. Holborow and D. M. Weir (*Taplow*): Sera from 100 cases of connective tissue disease have been examined by the fluorescein-conjugated anti-globulin test for the presence of the anti-nuclear factor previously described in disseminated lupus erythematosus (*Brit. med. J.*, 1957, 2, 732). Of eight cases of disseminated lupus erythematosus, seven were positive for both L.E. cells and the anti-nuclear factor, and one clinically typical, was negative in both tests. In three out of four doubtful cases of disseminated lupus erythematosus, the anti-nuclear factor was found. Of 44 sera from rheumatoid arthritis cases, eight contained the anti-nuclear factor. The L.E. cell test was positive in one of the latter (but the result of this test was available in only fourteen of the series). In Still's disease, three out of fifteen cases gave a positive anti-nuclear factor test; all were L.E.-cell negative.

Sera from the following cases were also investigated

with negative results: acute rheumatic fever, eleven; convalescent rheumatic fever, seven; polyarteritis nodosa, two; dermatomyositis, one; ankylosing spondylitis, one; and doubtful rheumatoid arthritis, five.

In the positive and negative rheumatoid arthritis group, comparisons were made between extent and activity of the arthritis, sex, age, duration, erythrocyte sedimentation rate, differential agglutination test, and nodules. Middle-aged females with a high differential agglutination test and nodules figure more commonly in the positive group. We have shown the affinity of the L.E. globulin factor for white cell nuclei of the rabbit, rat, mouse, guinea-pig, chicken, and toad, and in the chicken and toad the nucleated red cells also took up the factor. Tissue and white cell nuclei pre-treated with streptodornase failed to take up the factor.

Whether the anti-nuclear factor is responsible for the pathogenesis of L.E. remains in doubt; *in vivo* the factor is not taken up by the cell nuclei of tissues from L.E. cases; cell nuclei only take up the factor after *in vitro* incubation with the patient's own serum. Thus damage to the cell membrane or nuclear membrane seems to be an essential prerequisite for uptake of the serum factor.

**Treatment of Acute Rheumatic Fever with Phenylbutazone.** By G. Will (*Glasgow*): The treatment of 32 cases of acute rheumatic fever (nineteen males and thirteen females) was described, all of which fulfilled the modified Duckett Jones criteria. Seventeen cases were aged 16 years or under. In 21 patients it was the first known attack of rheumatic fever; eleven had been initially treated unsuccessfully with aspirin.

The maximum daily dosage of phenylbutazone was 600 mg.; this was given for the first few days and was followed by 400 mg. daily for 2 weeks, then 200 mg. daily for a further 2 weeks.

In every case there was a rapid response to treatment. Joint pain and swelling was relieved within 24 to 48 hrs and fever and tachycardia settled in 3 to 5 days. The erythrocyte sedimentation rate fell steadily to normal levels, in all cases to 15 mm./hr (Westergren) or below by the end of the fifth week of treatment. In two cases premature cessation of treatment was followed by relapse, with subsequent control on resuming treatment with phenylbutazone.

There was only one serious toxic episode in the series, a melaena. Mild epistaxis occurred in three cases.

## EMPIRE RHEUMATISM COUNCIL

### CHAIR OF RHEUMATOLOGY

The Empire Rheumatism Council has endowed a chair of rheumatology, which is being instituted by the Senate of the University of London at the Post-graduate Medical School of London at the Hammer-smith Hospital.

Dr. E. G. L. Bywaters, senior lecturer at the Post-

graduate Medical School, has been appointed the first professor.

This is the second chair of rheumatology to be endowed by the Council, the first having been instituted at the University of Manchester in 1953.

## LIGUE EUROPÉENNE CONTRE LE RHUMATISME

### *Fourth European Rheumatology Congress, 1959*

At a meeting of the Bureau of the European League against Rheumatism it was decided that the next congress would be held in Istanbul from September 28-30, 1959.

Those wishing to make a communication to the congress should send in a summary to the Secretariat of the national committee in Turkey by April 1, 1959. A certain number of papers will be selected for the plenary sessions, and these speakers will be allotted

30 minutes; the remainder will be allowed 10 minutes.

A tour is being organized of 10 to 14 days by boat from Venice; this will include visits to the Aegean Islands with conducted tours and will allow 4 days at Istanbul covering the period of the congress. Particulars of this tour will be sent to all members of the Ligue Européenne, who are asked to indicate whether they are likely to be able to join it.

## C.M.A. AND B.M.A. JOINT MEETING, 1959

The joint meeting of the British Medical Association and Canadian Medical Association in July, 1959, will include a Section of Rheumatology which will hold one 2½-hour afternoon session. The Canadian representatives are Dr. Arthur W. Bagnall (*C.M.A. Joint President*), Dr. Wallace Graham (*C.M.A. Vice-President*), Dr. Donald Graham (*Secretary*), and the B.M.A. representatives are Dr. George D. Kersley (*B.M.A. President*), Dr. J. J. R. Duthie (*B.M.A. Vice-President*),

and Drs R. J. G. Sinclair and John Glyn (*Secretaries*).

The meeting will consist of a symposium on "The Polyarticular Syndrome" by four speakers, a panel discussion on "Drugs in the Treatment of Rheumatoid Disease", and individual papers of 10 minutes each.

There will also be a Round Table Conference organized by the Canadian Medical Association on the subject of the rheumatic diseases.