An attempt is made to correlate the clinical and endocrinological sequelae of corticosteroid withdrawal with details of preceding corticosteroid therapy and tests of HPA function.

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Rheumatoid Rosettes (Significance of the Phenomenon). By F. DELRIEU, F. DELBARRE, and J. F. BACH (*Paris*).

When the lymphocytes of a patient suffering from rheumatoid arthritis and human group O, Rh negative, red blood corpuscles sensitized with rabbit immunoglobulin react with each other, the phenomenon of the rheumatoid rosette is observed microscopically.

Some of the lymphocytes are surrounded by a ring of more than four red blood corpuscles attached to them; the number of 'rosettes' in proportion to the total number of lymphocytes in the preparation is in excess of 6 per 1,000.

This phenomenon is the application to rheumatoid arthritis of a general phenomenon used to detect antibodies present on the surface of the lymphocytes (Biozzi).

The technique is simple and takes only a few hours.

Theoretically, the fact that the rosette phenomenon is positive in 80 per cent. of cases of rheumatoid arthritis, but nearly always negative in other conditions, including osteoarthritis, ankylosing spondylitis, and psoriatic arthropathy, is of great interest. There is an excellent correlation between the results of the Waaler-Rose test and the rosette test; for example, the test is also positive in certain related conditions and in non-rheumatological conditions with positive Waaler-Rose tests (cirrhosis, renal transplant).

There is, however, one important exception. In some slowly evolving polyarthritides, a positive rosette test at a stage when the Waaler-Rose is negative establishes the diagnosis of rheumatoid arthritis and assists the differentiation of cases which are clinically similar but in which basic biological tests give different results.

The rheumatoid rosette test becomes positive earlier than the Waaler-Rose test since the results are less closely related to the duration of the rheumatism. The results do not seem to be influenced by sex, or severity of disease.

Lastly, the phenomenon of rheumatoid rosettes appears to confirm that rheumatoid factor is secreted by the lymphocytes.

Sympathetic Control of Synovial Blood Vessels. By W. C. DICK, B. PORTER, K. WHALEY, G. NUKI, W. W. DOWNIE, and W. W. BUCHANAN (*Glasgow*).

A method of continuous monitoring of ^{133}Xe clearance from the animal joint, femoral venous flow rate, and femoral venous count rate has been devised.

It was established by this method that over 90 per cent. of the isotope cleared from the joint could be accounted for in the femoral vein. By measuring the diffusion and partition coefficients of ^{133}Xe it was then possible to derive an indirect measure of synovial blood flow.

Isoprenaline was then injected intra-articularly, and

the clearance rate, femoral venous flow rate, and femoral venous count rate all increased. Conversely, when noradrenaline was administered by the same route, all three rates fell. Neither of these responses was obtained after first administering the appropriate blocking agent. Thus, both alpha and beta receptors are present in synovial blood vessels.

The effect of these drugs when administered intravenously was also studied.

Finally, the effects of isoprenaline and noradrenaline on the human joint were studied by the ^{133}Xe clearance technique. Each drug was administered first alone, and then after the administration of its respective blocking agent to normal subjects, to osteoarthritics, and to rheumatoid arthritics.

Hygroma. A Histological Review. By A. RUBENS-DUVAL (*Paris*).

This histological review covers seventy surgical excisions carried out in the past 6 years. It includes 35 hygromata proper (knee 29; elbow 14; other sites 2) and compared with 35 cysts or synovial pseudocysts (popliteal space 13; wrist 11; back of the foot 11).

In benign attacks of bursitis, the structure and basic lesions resemble those of the articular synovium.

More severe cases show evidence of traumatic changes in the connective tissue and resulting inflammatory reactions, such as fibrinoid necrosis, vascular hyperplasia, and various types of extensive sclerosis.

The Technetium Scintigram as an Indicator of Synovial Vascularity in Rheumatoid Arthritis: its Comparison with the Results of Temperature Measurement. By J. A. COSH, D. J. LINDSAY, E. RHYS DAVIES, and F. J. RING (*Bath*).

Scintigrams were made by scanning knee joints with a scintillation counter 30 min. after the intravenous injection of Technetium 99m . In the presence of active rheumatoid arthritis, greatly increased radioactivity was found in the synovium, indicating an increase in local blood volume. A small proportion of radioactivity was shown to be derived from the concentration of isotope in synovial fluid. After the intra-articular injection of steroid repeat scans 7 and 14 days later showed the synovial radioactivity to be greatly reduced.

Parallel studies of the temperature of the knee joint were made by thermistors, radiometers, and thermography. They showed a corresponding reduction in temperature after steroid injection. This can be attributed to reduction in synovial blood flow, the flow being increased in the presence of inflammation.

The techniques of scintigraphy and of temperature measurement thus give similar information in rheumatoid arthritis, the former being derived from synovial blood volume and the latter from synovial blood flow. Temperature measurement is simpler and lends itself more readily to quantitation.

Stenosis of the Lumbar Spinal Canal and Sciatic Claudication. A Study of 29 Cases, Thirteen of which were Operated Upon. By L. AUQUIER, J. F. HIRSCH, J. B. PAOLAGGI, C. ROUQUES, and R. GHOZLAN (*Paris*).

Narrowing of the lumbar spinal canal may cause compression of the roots of the cauda equina.

Sensorimotor intermittent claudication of the two lower extremities and intermittent incontinence of faeces represent the most characteristic form of this condition. Three cases are reported, including a decompressive laminectomy. Standard x rays, x rays with contrast medium, and surgical exploration revealed stenosis of the canal, hypertrophy of the posterior articular masses, and absence of herniation of the discs.

The claudication may be limited to unilateral or bilateral sciatic pain which occurs only on walking and disappears on rest. Three operated cases are reported. Sixteen others were not operated upon but had similar symptoms. These patients were over 60 years of age, and were all males of athletic build. The pain was reproduced in the course of examination by stretching the lumbar rachis. The articular masses were hypertrophied. The cerebrospinal fluid had an increased albumin level and the contrast medium, in cases in which it was used, showed the stenosis of the canal. Frequently it was decided not to operate because of the age of the patient

and because he had learned to limit walking time and speed. The injection of soluble corticoids into the canal may bring appreciable relief.

Claudication is not always present. Basing their opinion on five other operated cases, the authors believe that stenosis can manifest itself by an ordinary sciatica or cruralgia. Certain features are noteworthy: a frequently insidious onset, uncertain root distribution, athletic habitus, pain upon stretching of the rachis and relief by the opposite position. Radiologically, hypertrophy of the articular masses is frequent, sometimes producing a spondylolisthesis (pseudo-spondylolisthesis). A lumbar air myelogram is the best examination to show stenosis of the canal aggravated by disc protrusions. The air myelogram must be used for pre-operative investigation should surgery be decided upon.

Suspicion of stenosis will orientate the neurosurgeon towards a wider area than that of simple sciatica due to herniated disc.

Book review

Textbook of Orthopaedic Medicine. Vol. 1, 5th ed., Diagnosis of Soft Tissue Lesions. By JAMES CYRIAX. 1970. Pp. 833, 137 figs, 64 pl. Baillière Tindall and Cassell, London. (100s.)

There has always been a very definite need for an undergraduate textbook describing the diagnosis, aetiology, and management of the many common extra-articular rheumatic conditions. These can be extremely painful and disabling to the patient and often elicit little sympathy, but can be rewarding to treat. Dr. Cyriax, in the latest edition of his well-known textbook, rightly stresses the importance of a careful clinical examination and his methodical way of examining joints such as the shoulder has always been one of the highlights of this book and repays careful study. Of interest are the new series of epidurograms obtained by Dr. Mathews, purporting to show the reduction of lumbar disc prolapse following traction. The author also describes in detail the technique of epidural injection of which he is an exponent.

The text is lengthy (800 pages) and there is much repetitious material, but the book is reasonably priced. The author has a didactic style and makes many individual statements that one would dispute or be anxious to know the grounds on which they are made. This does not necessarily mar his careful clinical descriptions. Some examples include page 5—that rheumatoid arthritis is a generalized affection of the fibrous tissue of the body

in which the chief and most obvious incidence is on the capsule of the joints; page 235—monoarticular rheumatoid arthritis of the shoulder is commoner than frozen shoulder and responds dramatically to hydrocortisone; page 312—triamicinolone is better than hydrocortisone in the treatment of tennis elbow; page 389—lumbar disc lesions are responsible for well over 90 per cent. of all organic symptoms attributable to the lower back.

Today there is a much readier acceptance by physicians and surgeons of the place of manipulative treatment, and one foresees that physiotherapists will soon be trained in the simple techniques, but skill is needed in case selection. Even if one is happy to accept some of Dr. Cyriax's indications and techniques and his undoubted success, his claims that one can reduce a disc prolapse by manipulation are as yet unproven. In his enthusiasm for such treatment he dismisses heat and remedial back exercises as anachronisms. This again is a viewpoint with which one disagrees so far as non-discogenic back pain is concerned, although here careful case selection is also needed. These criticisms are not meant to detract from the book, but it should be approached in a critical manner, as this is a field of medicine in which proof for one's opinions is difficult to obtain. In this connection the claims made by Dr. Barbor in chapter 21 for the use of dextrose sclerosing solutions injected into lumbar ligaments in a large uncontrolled series of patients must be treated with caution.

E. B. D. HAMILTON

Note

The first Professorship in Rheumatology in the U.S.A., endowed at the University of Alabama by Mr. N. H. Waters in memory of his wife, will be held by Dr. Howard

L. Holley, Director of the Division of Rheumatology and Clinical Immunology at the Medical Centre, Birmingham, Alabama.