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.