

**DR. A. ST. J. DIXON (Bath).** Although you assume that loss of Xenon from the joint occurs entirely *via* the blood stream, this is not necessarily true. In rheumatoid joints, contrast arthrograms show that contrast material with a lower diffusibility than Xenon may leave the joint by the lymphatic system, particularly in the elbow and wrist. This point is even more important if you think in terms of joints in motion rather than joints at rest.

**DR. DICK:** The point about moving is certainly true. We have considered this but it was impracticable to measure it properly when moving. The point about the lymphatic drainage of the joint; is not this a time related phenomenon? Does it not take significantly longer?

**DR. A. ST. J. DIXON (Bath):** You see it within a few minutes of doing an arthrogram.

**DR. DICK:** Where can it be detected?

**DR. A. ST. J. DIXON (Bath):** In a knee arthrogram, contrast appears in the lymphatics in the popliteal fossa and may miss the popliteal lymph nodes. In the elbow, the epicondylar lymph nodes are quickly opacified, sometimes within a couple of minutes.

**DR. DICK:** There may well be, as you say, some lymphatic component, but since lymphatic flow is related to blood flow this problem may not be insuperable.

**Iron Content of Synovial Tissue in Rheumatoid and Normal Individuals.** By A. G. MOWAT and T. E. HOTHERSALL (*Edinburgh*).—Published in full in the *Annals* in July, 1968.

**Computer Matching of Arthritis Patients.** By J. A. BOYLE, J. A. ANDERSON, and W. W. BUCHANAN (*Glasgow and Oxford*).—One of the problems in arthritis is the comparison of patient groups, particularly in the field of epidemiology. A procedure which allowed accurate matching of groups of patients in different centres is desirable. This communication described a method which might allow this to be done. A standard reference set of patients with defined rheumatoid arthritis was constructed and another reference set of patients with defined osteoarthritis was also used. Using a procedure derived from Bayes' law for the probability of causes, the likelihoods of each of a fresh group of patients belonging to the patient population in both reference sets were calculated. The discrimination achieved by this technique between the two diseases was presented and its possible applications were discussed.

**Discussion.—DR. J. S. LAWRENCE (Manchester):** Are you talking about hospital patients or are they people discovered in the population?

**DR. BOYLE:** We were dealing with hospital patients, but it could perhaps be used with patients with mild arthritis who did not go into hospital.

**DR. J. S. LAWRENCE (Manchester):** In the population sample, one is dealing with many people with mild-osteoarthritis and comparatively few with rheumatoid arthritis; if you apply criteria blindly you end with far too many false positives. The American Rheumatism Association criteria have been satisfactory in hospital patients because they are applied to patients with rheumatoid arthritis.

**DR. BOYLE:** I do not know if the method will work when applied to population samples, but it could possibly be used in the following way. A sample of patients with sero-positive erosive arthritis could be measured against the probability matrices; the scatter of likelihoods which result from this comparison could then be compared with the scatter of likelihoods given by patients who are thought to have rheumatoid arthritis in another country. The question of false positives therefore would not arise.

**DR. J. S. LAWRENCE (Manchester):** That is right so long as the same observer has seen these patients in different parts of the world.

**DR. BOYLE:** The observer error isn't insurmountable but I agree that this would introduce difficulties.

**DR. J. S. LAWRENCE (Manchester):** So you say, "We think this is probably rheumatoid arthritis", and so you are introducing an opinion to start with.

**DR. BOYLE:** I agree that this technique is not intended to define rheumatoid arthritis, but merely to compare your opinion of what rheumatoid arthritis is, using your criteria, with someone else's opinion in a different part of the world, using the same criteria.

**PROF. E. G. L. BYWATERS (Taplow):** The big problem is that the patient's illness runs along in time; when filling in computer forms on items which the patient has manifested in the past you are doing a retrospective survey.

**Long Leg Arthropathy.** By A. ST. J. DIXON and S. CAMPBELL-SMITH (*Bath*).—To be published in full in the *Annals* with the subsequent discussion.

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