but the rheumatoid samples shown were taken from finger joints from areas where there were no macroscopic changes although there were angular erosions.

PROF. V. WRIGHT (*Leeds*) What is the mechanism by which just soaking in saline seems to strip the surface layer off? The evidence that Clarke (1971) has put forward about the depressions being lacunae that once held cells was fairly good. Would you care to comment on this? Does the pore size you have measured fit in with the figures of McCutchen (1966) and Maroudas (1967) at 12.5 Å.

DR. HOLT The last question first—the pores are much bigger than those that McCutchen described, but are below the exclusion limit of hyaluronic acid so that they should not let hyaluronic acid through.

Regarding the first question, we have on evidence, but I would like to suggest that large molecular weight substances from the synovial fluid are constantly being deposited on the surface. I think we have demonstrated a filter mechanism which produces a surface membrane formed of synovial fluid macromolecules. This can be washed off by saline. These suggestions are purely hypothesis.

ANON Why are some of the red cells in the deep layer of cartilage crenated?

DR. HOLT These are not red cells but crystals produced during drying. Crenation is not a feature of this method of preparation but slight shrinkage does occur.

References

- Clarke, I. C. (1971). *Ann. rheum. Dis.*, 30, 15
Maroudas, A. (1967) *Proc. Inst. mech. Eng.*, 181 (3J), 122
McCutchen, C. W. (1966) *Fed. Proc.*, 25, 1061

Prophylactic Synovectomy of the Rheumatoid Hand Published Clinical Trial with 5 to 8-year Follow-up. By F. V. NICOLLE and R. A. DICKSON (*Royal Postgraduate Medical School, London*)

Most of this material was published in the *Annals* in September, 1971 (vol. 30, p. 476)

Discussion

DR. A. G. S. HILL (*Stoke Mandeville*) I am a little puzzled by the figure for subsequent synovitis in the unoperated MCP joints being 8.4 per cent. whereas that in the wrist and hand elsewhere was 50 per cent. Is that correct?

MR. NICOLLE That is quite right. These MCP joints showed little evidence of clinical activity, whereas the wrist joints did show frequent evidence of rheumatoid disease.

DR. HILL Many of the MCP joints had no erosions demonstrable before operation. How many in fact had erosions when the joint was opened?

MR. NICOLLE All these cases were operated on before I took part in this study, so that I am unable to answer this question.

DR. D. A. BREWERTON (*London*) Could some of your good results be due to patient selection? They had their disease for an average of nine years and most still only had minimal radiographic changes. If the course had been so benign in the first 9 years you would not expect them to

worsen greatly in the following 6 years. This situation is surely very different from prophylactic synovectomy performed for the acute painful joint early in the disease.

MR. NICOLLE Other evidence has shown that the earlier prophylactic synovectomy is performed, the better are the results. In the earliest cases presented a great deal of conservatism was exercised so that one would have expected poorer results.

References

- Dickson, R. A., Petrie, A., Nicolle, F. V., and Calnan, J. S. (April, 1972) *Bio-med. Engng* (awaiting publication)
Gariépy, R., Demers, R., and Laurin, C. A. (1966) *Canad. med. Ass. J.*, 94, 1349
Stevens, J., and Whitefield, G. A. (1966) *Ann. rheum. Dis.*, 25, 214

Assessment of Television Teaching in Rheumatology. By V. WRIGHT, D. I. HASLOCK, J. IVES, and D. HOLROYDE (*Rheumatism Research Unit, University of Leeds*)

Little work has been done on the use of television in the teaching of rheumatology and as far as we know no attempt has been made to evaluate such work. The present study concerns a programme that was constructed for the period devoted to 'Introduction to Rheumatology'. The 48 students attending were divided into two groups, one of which watched the television presentation and the other received a lecture on the same topic. Immediately after the lecture a short test was given to determine immediate recall. A month later, after a lecture on nephrology given on a snowy morning at 8.30 a.m., the same test was re-applied to ascertain delayed recall, the students being unaware that this was going to happen. This then produced three groups, those who had been to the lecture, those who had been to the television presentation, and those who had been to neither (11)!

The questions put to the students were:

- (1) What are the main symptoms relating directly to the patient's joints that must be elicited?
- (2) In what ways might a rheumatic disease affect the patient's general health?
- (3) Why is a thorough review of the systems symptomatically important in rheumatic diseases?
- (4) Name a rheumatic disease in which a family history may be helpful.
- (5) What help is a social history in rheumatic disease?
- (6) What points may emerge from the classical order of examination as far as joints are concerned (inspection, palpation, percussion, auscultation)?

The television group had a higher score on four of the questions, there was an equal score on one, and the lecture group had a higher score on one question. The standard deviation of marks was higher in the lecture group.

For delayed recall the television group maintained their superiority of marks on three of the six questions. On two questions the non-attenders equalled the marks of the lecture group.

Members of the television group were given a short questionnaire on their reaction to this presentation, and it emerged that they liked the television prepresentation, which differed from the results obtained in other disciplines in the University. The whole process was very salutary for the lecturer who came to the realization that he had