steroids on any other patients than rheumatoids using this
technique?

DR. VERNON-ROBERTS We intended to carry out a
further investigation on patients before and during
therapy to evaluate them clinically by one of the recog-
nized indices. We did not carry this out in the investigation
presented, but Dr. Jessop made a clinical assessment of
disease activity and we found a significant correlation
between this and the phagocytic scores of macrophages in
the untreated patients with rheumatoid arthritis, which
gives us encouragement to continue this investigation.
Regarding your second point, we had a few patients not
included in this series who had polymyalgia rheumatica
and were on steroids. They exhibited marked depression
compared to our control group.

DR. A. G. MOWAT (Oxford) These are two very nice
papers, but I wonder if you have not confused yourselves
by this simple 'skin window' technique? There are four or
five stages to this inflammatory process: these include
changes in the vessel wall, migration of cells through the
vessel wall, chemotaxis of the cells, and finally phago-
cytosis. Your method measures only phagocytosis. In
rheumatoid arthritis there are important vascular changes
and a serious defect in chemotaxis of the cells has been
demonstrated (Mowat and Baum, 1971).

DR. VERNON-ROBERTS We have qualified our state-
ments and have made it clear that all these factors operate
in inflammation. In using these techniques we cannot
distinguish which aspects of the inflammatory response
these compounds were inhibiting. We know, for example,
that prednisolone inhibits every stage from the release of
monocytes from the bone marrow pool to the phagocytic
activity of the migratory cells. One does not know much
about the mechanism of action of gold, but we are going
to carry out further experiments on animals to study the
production of monocytes, their emigration, chemotaxis,
and so on. We think that the very significant difference
between the rheumatoid and control groups and the
results in our patients on gold and steroid therapy suggest
that this relatively crude test may provide useful informa-
tion on response to treatment.

Reference
of polymorphonuclear leukocytes from patients with rheumatoid
arthritis)
Nicol, T., Quantock, D. C., and Vernon-Roberts, B. (1967) in 'Reticulo-
endothelial System and Atherosclerosis', pp. 221. Plenum Press, New
York

Joint Hypermobility—Asset or Liability? A Study of Joint
Mobility in Ballet Dancers. By R. GRAHAME and the late
Miss J. M. JENKINS* (Guy's Hospital) This paper was

Discussion
DR. J. A. D. ANDERSON (London) Have you con-
sidered using applicants rejected by the Royal School of
Ballet as alternative controls for your study?

* We regret to announce that Miss J. M. Jenkins died on March 15,
1972.

DR. GRAHAME It was difficult enough to examine the
ballet students, let alone the rejects!

PROF. E. G. L. BYWATERS (Taplow) Did any of your
ballet students in training show, or give a history of, joint
effusions, and do you think that these could be avoided by
adequate muscular control?

DR. GRAHAME Surprisingly few of these girls—they
were only 17 years old—had had trouble of this nature,
but a lot of older patients whom I have seen with general-
ized hypermobility do have this problem and in these cases
I do believe that attention to the musculature, and par-
ticularly quadriceps drill, in relation to the knee joint, is of
great value in preventing this complication.

DR. J. H. GLYN (London) Dr. Grahame has persuaded us
that hypermobility is indeed an asset to a 17-year-old
ballet student. Does he know what happens to these
hypermobile joints eventually? Presumably there must
have been long-term studies on the incidence of degenera-
tive and other arthritic diseases as such girls mature. The
first metatarsophalangeal joint would seem to be an
obvious joint worthy of such a simple prospective study.

DR. GRAHAME I don't think there are much data on this
subject, but perhaps this would be the appropriate time to
mention that we have now set up at Guy's a clinic that will
study the consequences of joint hypermobility as seen in
ballet dancers. Perhaps in 20 years time we may be able to
look into this.

DR. J. B. MILLARD (Clacton) May I ask Dr. Grahame to
carry on with this type of research, because osteoarthritis of
the hips is a great problem, and my impression is that
people with hypermobile hips, like the Chinese and the
people from the far East, do not get osteoarthritic hips. It
is important to find out why.

Total Hip Replacement using the Charnley Prosthesis in
Inflammatory Joint Disease. By J. HARRIS, C. D. R.
LIGHTowler, and R. C. TODD (The London Hospital)

Between August, 1966, and December, 1970, 73 Charnley
low-friction arthroplasties were performed in 55 patients
with inflammatory joint disease. The main indication for
surgery was severe pain in a hip which was the site of
extensive destructive change. There were 54 operations
performed for rheumatoid arthritis, twelve for ankylosing
spondylitis, psoriatic arthropathy (3), Still's disease (3),
and Behçet's syndrome (1).

44 patients were reviewed in a clinic and five replied to
a questionnaire. Three are dead and three are lost to
follow-up. 65 operations were therefore reviewed (59 in
the clinic and six by questionnaire).

Before total hip replacement, 95 per cent. of the hips
were severely painful, and postoperatively 88 per cent. were
virtually pain-free. In those patients who attended for
follow-up (excluding four in whom the prosthesis had
been removed) movement had increased by at least one
grade (d'Aubigné and Postel, 1954) in 89 per cent. There
was at least 60° of flexion in 89 per cent. of hips.