treated with rest in bed and splintage followed by graded exercises. It was our aim to decide if indomethacin could effectively replace salicylates under these circumstances.

Hajnal, Sharp, and Popert (1959) have drawn attention to the considerable effect of "spontaneous improvement" in hospitalized patients. In addition to rest in bed and splintage, other features such as increasing familiarity with hospital environment and in the case of strength of grip, practice in the use of the apparatus, contribute to the improvement shown. This must be dissociated from the effect of drug therapy before the value of a new drug can be assessed.

PATIENTS STUDIED AND METHODS EMPLOYED

34 women and eight men with classical and definite rheumatoid arthritis (1958 A.R.A. Criteria—Ropes, Bennett, Cobb, Jacox, and Jessar, 1959) were studied. Before entering the trial each patient spent one week settling into the hospital routine. During this period analgesia was provided by soluble aspirin and was maintained at the pre-admission dose provided that this did not exceed 4 g. daily. If the patient was already on corticosteroids, the dose was maintained at the pre-admission level during the first week and throughout the trial.

Patients were excluded from the study if they had known peptic ulceration or severe dyspepsia or were intolerant of aspirin, or if the grip test could not be adequately performed by reason of severe anatomical deformity of the hands or if the strength of grip exceeded 300 mm. Hg.

The patients were allotted alternately to indomethacin or soluble aspirin on entry. The first drug was given for a 2-week period and then the other drug was administered for a further 2 weeks, so that half the patients received indomethacin followed by soluble aspirin, and the other half received soluble aspirin followed by indomethacin. The soluble aspirin was specially coloured and flavoured and the patients were unaware of the identity of the tablets. It was given in a dose of 4 g. daily throughout the 2-week period. Indomethacin was given in a dose of 25 mg. twice daily for 2 days, followed by 25 mg. three times daily for 6 days and then 25 mg. four times daily for the remaining 6 days.

Of the 42 patients, 38 completed the study. Two patients were withdrawn while taking soluble aspirin, one because of severe deafness and the other on account of repeated vomiting. One patient developed profound dizziness on indomethacin and the drug had to be withdrawn. The fourth patient was given an incorrect dose of indomethacin during the second week of treatment and was therefore excluded from the analysis. Of the remainder, twenty patients had commenced the trial taking soluble aspirin and eighteen patients had started with indomethacin. Five of those starting on solube aspirin were taking prednisolone with a mean daily dose of 9 mg.; seven of those starting on indomethacin were taking prednisolone with a mean daily dose of 10 mg.

Clinical assessment.—Assessments were carried out on the first day of the trial and thereafter at weekly intervals until the completion of the study. As far as possible the patients were assessed at the same time of day throughout and the daily physiotherapy was not given until the assessments had been made. Strength of grip of both hands were recorded weekly. Swelling of the proximal interphalangeal joints was measured using jeweler's rings. These rings were labelled from A to Z with intermediate half-sizes; the diameter of size A was 0.476 in. and the increase in diameter from size A to B was 0.015 in. The patients were questioned concerning headache, dizziness, and dyspepsia, and any other side-effects were noted. At the end of the study the patients' preference for one drug or the other was recorded.