DR. E. GLICK (*London*) I think we have to be careful about interpretation. This was not a trial of bed rest, it was a trial of hospitalization, as the wording of the summary makes clear. All the outpatients had a minimum of 8 hrs bed rest, so you were comparing 8 and 13 hrs which are not very different. It is hospitalization and avoidance of a lot of the minor trauma that goes with looking after houses and so on, that you have been testing and not bed rest alone.

DR. LEE Yes, it is hospital inpatient treatment versus outpatient treatment. I think hospital inpatient treatment involves more than bed rest because the patient is actually removed from the burden of domestic and business worries as well.

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A Double-blind Comparative Trial of Cyclophosphamide and Gold in Rheumatoid Arthritis. By J. M. GUMPEL, A. HALL, and B. ANSELL (*M.R.C. Rheumatism Unit, Canadian Red Cross Memorial Hospital, Taplow*)

A comparative study of gold and cyclophosphamide was started in this unit in December 1969. Sixty-seven patients with rheumatoid arthritis whose disease activity was not controlled by conventional therapy and who would, in the ordinary course of events, have been treated with gold have entered the study. All had completed their families, and were willing to enter a trial of this nature. By random selection the patient received either cyclophosphamide and dummy gold injections, or gold and dummy cyclophosphamide. The therapy was controlled by one physician, while the clinical state of the patient was regularly assessed by a second physician without knowledge of the active drug or of any side effects that had occurred. This report is on the first year of treatment of fifty patients.

There was statistically significant improvement in functional state in patients on gold and on cyclophosphamide. The results for decrease of joint pain, increase in grip strengths, and improvement in walking time were significant for the patients on cyclophosphamide but not for those on gold. The ESR improved in both groups, the significance being greater ($P=0.001$) with gold than with cyclophosphamide. Side effects were more common with cyclophosphamide but no patient was withdrawn from cyclophosphamide because of drug-related side effects, whereas three patients were withdrawn from gold therapy because of severe gold rash.

Discussion

DR. H. L. F. CURREY (*London*) Can you correlate the dose of cyclophosphamide with the response of the patients? Two trials have shown what appears to be a threshold effect and I wonder whether you have looked for this? Secondly, comparing your results with ours from The London Hospital, I am impressed that your results with cyclophosphamide are better than ours, from the

point of view of both toxicity and clinical response, and I think the reason for this is that you tailored the dose, whereas we had to use a fixed dose.

DR. GUMPEL A special feature in the design of this study and the reason for having an independent assessor was that it gave us this freedom to tailor the dose to suit the patient. This was very important, and we think that if we had used a fixed dose as you mention in your study, we would have had more toxicity.

DR. J. KAKAKI (*Holland*) Have you studied some parameters of cell mediated immunity in your group of patients treated with cyclophosphamide?

DR. GUMPEL Initially we studied at the beginning of treatment and after 3 months, but abandoned this because of our concern about the reproducibility of the results and especially with staff shortages and changes.

DR. P. A. BACON (*Bath*) I think your study very nicely confirmed that cyclophosphamide is one of the most effective drugs for rheumatoid arthritis around at present and that the chief problem is controlling the toxicity. I have recently been giving a large dose, 2 mg/kg, but as an intermittent dose, 1 week on and 1 week off or variants of this regimen. My initial impression is that one can get a good effect with this sort of intermittent therapy and I think toxicity may be less. Have you any experience of this sort of regimen?

DR. GUMPEL No, but the regimen you mention has many theoretical attractions.

DR. C. BARNES (*London*) Were there any radiographic differences comparing films taken at the beginning and end of the trial?

DR. GUMPEL Yes, in many patients we have seen healing of erosions both on gold and on cyclophosphamide. We have spent considerable amounts of time looking at the radiographs, and have just recently worked out a system that will allow us to produce a meaningful score to compare before and after treatment.

On the Relationship Between Inflammatory Joint Disease and the Foregut Hormones, Gastrin and Secretin. By P. J. ROONEY, J. MILLAR, J. R. HAYES, K. D. BUCHANAN, and W. C. DICK (*The Centre for Rheumatic Diseases, University Department of Medicine, Royal Infirmary, Glasgow; University Department of Medicine, Queen's University of Belfast*)

Serum immunoreactive gastrin levels have been found to be raised in approximately one-third of patients with rheumatoid arthritis. No increase in serum gastrin levels has been noted in eight patients with psoriatic arthritis, twenty-three patients with systemic lupus erythematosus, seventeen patients with ankylosing spondylitis, and twenty-five patients with osteoarthritis. In addition, no rise in immunoreactive gastrin was observed in sixteen patients with active pulmonary tuberculosis and ten patients with recent myocardial infarction (within 48 hrs).

Studies have been conducted in patients with rheumatoid arthritis in which fasting immunoreactive gastrin was