Review of Rheumatoid Arthritis, Gold Therapy, Contact Allergy and Blood Cytokines

Gold therapy for patients with rheumatoid arthritis is a useful form of treatment. Unfortunately, many patients given gold have to stop due to cutaneous side-effects. The authors originally demonstrated that contact allergy to gold is relatively common and in this paper they further explore the issues of the significance of positive patch testing to gold in patients receiving gold therapy. The relationship between cutaneous allergy to gold and contact patch test reactions to gold at present is not entirely clear, and the (as yet unproven) hypothesis behind the study is that cutaneous allergy to gold is a marker of likelihood of development of cutaneous side-effects to therapeutic gold.

There are 2 elements to the study - observation of cytokine responses and clinical responses. The cytokine data is interesting. Interpretation of the data is limited by 1) lack of information - what was the data scatter, was the mean increased disproportionately by a single sample, does the probability figure relate to Wilcoxon tests, what were the confidence intervals and 2) small sample size.

Patients were divided into two groups, those with a positive gold patch test received a dose of 5mg of intramuscular gold, and with a negative patch test received a dose of 10mg. No reasons were stipulated for this dose of gold - could 2.5mg and 1mg have been used? - and no randomisation was reported.

The paper is weakened by the clinical conclusions. The cytokine data provides some grounds for their conclusions, but it would be more prudent to conclude that further clinical studies are required to establish the role of path testing to gold in patients above to receive therapeutic gold eg a much simpler, more effective study would be to look at patients with or without a positive patch test to gold, randomly allocated to 10mg or 5mg of GSTM. In particular the conclusion that the starting dose of GSTM should be lowered to 5mg to minimise the risk of acute adverse reactions, is not borne out by the one acute
reaction seen in the patient group, which was seen in a patient given the 5mg dose of GSTM.

The paper is well written and the observations are undoubtedly interesting. The discussion is well thought through. I would recommend publication of the paper presented as a case series, with additional analysis of data set, and if the authors modified their conclusions.

**Competing interests:**

None declared.