

LETTERS

Protective effect of gold rings and rheumatoid arthritis

I found the article of Mulherin and colleagues¹ regarding a presumably protective effect of gold rings against articular erosions in rheumatoid arthritis (RA) very interesting, but it surely raises more problems than it can solve.

A few years ago we published a similar observation² that contradicts the hypothesis that the metacarpophalangeal (MCP) joint of the left ring finger would have remained less affected by the disease because of lymphatic drainage of the gold from the ring worn distally to it.

Our case was a female patient aged 54, suffering from Sjögren's syndrome with seropositive RA of 25 years duration. Examination of the hands showed typical rheumatoid aspect, with predominant MCP and proximal interphalangeal (PIP) joint involvement in a roughly symmetrical distribution; an augmentation on the dominant hand, the right one, could be seen as well. However, there was an exception from the symmetry of changes: the normal aspect of the fourth left

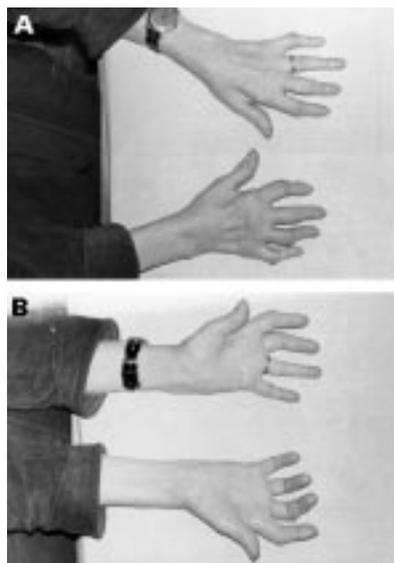


Figure 1 The dorsal (A) and palmar (B) aspects of the hand. Note the normal appearance of the fourth finger in the left hand.

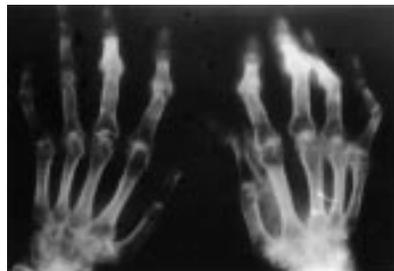


Figure 2 Radiographic appearance of the hands. The wedding ring was removed as routine by the radiologist.

finger (fig 1). These data were confirmed by radiographs showing erosive changes at the MCP and PIP joints of both hands apart from the left ring finger PIP joint, where a mild juxtaarticular osteoporosis was the only change (fig 2). Without another explanation that would have been confirmed by a thorough anamnesis, we had to accept the explanation of the patient, a highly educated person and wife of a physician, that this joint would have been protected by the wedding ring that she was wearing even before the onset of disease. Moreover, a similar effect was noticed by the patient on the fourth finger PIP joint of the opposite hand, on which she had been wearing for a few years an adorning gold ring. That one was removed several years before and the patient noticed that the distal joint began afterwards to deform.

The two findings are similar, but differ by the site where the hypothetical protector effect made itself conspicuous, distally and respectively proximally to the position of the gold ring. Our case virtually contradicts the explanation given by Mulherin and colleagues of gold "colonisation" of the MCP joint through local lymphatic drainage and is a challenge to the proposed protective effect, if it exists, of the PIP joint. Without excluding the possibility of a local chemical action, like in the rare cases of local gold toxicity,³ we are inclined to attribute rather a mechanic explanation to the phenomenon.

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- 1 Mulherin DM, Struthers GR, Situnayake RD. Do gold rings protect against articular erosions in rheumatoid arthritis? *Ann Rheum Dis* 1997;56:497–9.
- 2 Boloșiu HD, Parasca I. An unusual case of asymmetric rheumatoid involvement in the hands. [Letter]. *Clin Rheumatol* 1985;4:363.
- 3 Rennie JAN. Local gold toxicity. *BMJ* 1976;2:1294.

Gold and ring finger

We read with interest the article by Mulherin *et al* concerning the protective nature of gold rings in 55 patients.¹ At the end point of our prospective 20 year follow up study of 103 patients with recent (≤ 6 months) seropositive rheumatoid arthritis, the mean Larsen grades of the MCP joints were: MCP I 1.1, MCP II 2.2, MCP III 1.9, MCP IV 1.3, MCP V 1.5 and of the PIP joints PIP II 0.7, PIP III 1.0, PIP IV 1.0, and PIP V 0.9.² Thus, in our epidemiologically collected inception cohort, the MCP I and PIP II joints were least destroyed. No statistically significant difference was found between any hand joints comparing left with right during the follow up.

We suppose that intra-articular pressure is least in MCP I and IV causing less destruction. The ring finger is protected by other fingers, and therefore a ring of soft metal has been used on that finger for thousands of years. Our opinion is that the sometimes excellent effect of gold treatment is based on the SO- group of gold compounds, as is the case with penicillamine. Anyway, exchanging a golden ring with the opposite sex has a positive emotional effect.

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- 1 Mulherin DM, Struthers GR, Situnayake DR. Do gold rings protect against articular erosions in rheumatoid arthritis? *Ann Rheum Dis* 1997;56:497–9.
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Author's reply

Professor Boloșiu's observations are of some interest and we were not aware of his previous publication in which he describes a similar case where sparing was noted in association with the use of a gold ring noting that in his case radiological sparing was noted in the ring associated PIPJs.

Whether this would argue against a local effect of gold through lymphatic drainage or an alternative protective mechanical explanation would be difficult to assess.

Clearly we would agree with Professor Boloșiu that a mechanical explanation cannot be ruled out.

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Rheumatology outpatient training

The leader by McDonagh regarding outpatient training for rheumatology specialist registrars is a timely and important commentary.¹ Having done most of my training in the United Kingdom, for the past two years I have spent time at the University of Toronto, Division of Rheumatology. This experience provides some observations that are relevant to the current debate.

It is impossible to avoid the differences in the organisation of health services and postgraduate medical education in the UK and Canada. These have a significant impact on training. The NHS is consultant-led with a high dependency on doctors at the senior house officer and registrar grades to provide the service. Many outpatients are therefore seen by doctors who may have little or no previous experience in rheumatology. Because of the pressure of numbers and resultant time constraints mistakes in management as well as potentially unnecessary follow ups can go unchecked. The Canadian health care system is consultant-based. Specialists work on a fee for service basis and are required to see each patient. Clinics are organised in proportion to the number of patients the specialist can see. Not all clinics are training clinics, the "service only" clinics do not have trainees in attendance. At the training clinics, patient numbers are reduced to allow the specialist time to review the case. Postgraduate training programmes are university rather than hospital-based. All residents and their salaries are assigned to the university associate dean of postgraduate education. The allocation of "student trainees" and their remuneration budgets are then made to training sites based on their ability to provide an educational programme. In return, the training site gets prestige as well as a measure of service from the student trainees. The major implication of

such a switch is the transfer of additional service obligation to the consultant. This, in turn, may be delivered by the consultant or by clinical associates appointed for this purpose.

This framework enables adequate time to be set aside for one to one teaching at the clinics. The content of such teaching evolves through the period of time the trainee is with the consultant. Early on it focuses on history and examination skills. Later, as competence develops, more time is spent on management and related issues. Observation of the consultant-patient interaction is also a key area that is both possible and extremely instructive in this setting. Some clinics also arrange post-clinic rounds. This enables full and detailed discussion of a few cases by trainees and staff. Teaching seminars can also be made more relevant to the outpatient clinic by adopting a problem-based learning approach,² this learning exercise can easily be geared towards everyday clinic decisions and conduct.

Pressure to provide a service is a major obstacle to maximising the training potential of clinics. However, conversion of specialist registrars (and senior house officers!) to a student trainee role would, in many hospitals, lead to chaos in the outpatient service, the demands on which continue to rise inexorably.³ One starting point would be for consultants with a trainee to designate one session a week as a "training clinic". This should be a regular commitment not just confined to the first few weeks of the post. Such a clinic would have a smaller number of patients with protected time for teaching. For consultants with a large clinical service

dependent on doctors in training grades, this would provide a mechanism by which training and teaching in the outpatient setting could begin and gradually evolve with time. This could be coupled with departmental clinic rounds and a problem-based learning approach for teaching seminars. Incentives to provide such training will be necessary to balance the pressures of service. The paradigm shift in funding discussed above would change the status of trainees from apprenticeship to studentship and would be a major incentive to change the service: education ratio of posts to one in which education is favoured.

In Toronto the opportunities to learn in the outpatient clinic are considerable. The current pressure of service within the NHS needs to be resolved to allow trainees the time and space to learn from their trainer. While a paradigm shift in the overall structure is necessary to realign service and education, introduction of the "training clinic" model would be possible within the current structure. I agree with Dr McDonagh that we need to comprehensively re-think how we use the outpatient clinic to its maximum potential for the training of rheumatologists in the UK.

I am indebted to Dr Dafna Gladman, Director of Postgraduate Training Program in Rheumatology, University of Toronto and Dr Murray Urowitz, Associate Dean of Postgraduate Education, University of Toronto for their helpful discussion of this subject.

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- 2 Dolmans D, Schmidt H. The advantages of problem-based curricula. *Postgrad Med J* 1996;72:535-8.
- 3 Kirwan JR. Rheumatology out-patient workload increases inexorably. *Br J Rheumatol* 1997;36:481-6.

Author's reply

I wish to thank Dr Bruce for sharing his recent experience of rheumatology training in North America and providing an evidence base for future discussion of this theme. He illustrates that quality training can develop in the outpatient setting and suggests a realistic starting point for NHS rheumatology outpatient services with a weekly "training clinic". The issues of service demands, remuneration, and responsibility are appropriately highlighted. I would actively encourage further sharing of such experiences and ideas and would hope that future "teaching the teacher" courses will cover such training in the outpatient setting specifically.

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