average 12 years younger than the EPO group, the initial value was more favourable at 371 mg/l. But the rise was much smaller, to only 383 mg/l. On this basis EPO might be considered to have a more favourable protective action than olive oil. Moreover, EPO also significantly lowered the concentration of apolipoprotein B, a risk factor for coronary disease.

The strongest prediction of cardiovascular risk may be provided by the formula: (total cholesterol×0-42)−(HDL-cholesterol), where HDL=high density lipoprotein. If this formula is used EPO and olive oil produced almost the same reductions in risk factors, 23% in the case of EPO and 25% in the case of olive oil.

At the end of the discussion the authors say that polyunsaturated fatty acids decrease HDL-cholesterol. They imply that because EPO is rich in polyunsaturated fatty acids it also will lower the desirable HDL-cholesterol. The paper they quote, however, says nothing whatsoever about EPO. The authors' own findings show a slight rise in HDL-cholesterol in response to EPO. Other studies have shown that EPO either has no effect on HDL-cholesterol or that it significantly increases it. There is therefore no evidence at all that EPO reduces HDL-cholesterol and some evidence that it raises it.

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References

Disease remission in rheumatoid arthritis

Sir, I read with great interest the fine and thought provoking viewpoint of Drs Scott, Spector, Pullar, and McConkey.1 We have also been concerned about the efficacy of the indices used by rheumatologists to assess the outcome of patients with rheumatoid arthritis (RA) who have improved their disease (i.e. disease “remission”).

Dr Horrobin stresses interesting and possibly important aspects. The effects of evening primrose oil (EPO) in rheumatoid arthritis may be slow in onset and first appear later than the observation period (12 weeks) in our study. From an ethical and practical point of view, however, at least in the Finnish rheumatoid population, it was not possible to continue the study longer with ineffective treatment. On the other hand, the trial was long enough to cause changes in serum fatty acid composition.

The conclusion presented by Dr Horrobin that EPO and olive oil may be as good as non-steroidal anti-inflammatory drugs at controlling symptoms of rheumatoid arthritis is interesting, but is premature and too speculative.

We agree that the changes caused by EPO in serum fatty acid composition are small, maximally about 23% increase in arachidonic acid and about 42% decrease in eicosapentaenoic acid percentage share. Low concentrations of polyunsaturated fatty acids have been suggested to indicate an increased risk for cardiovascular disease in the two studies referred to by Dr Horrobin. Our point of view was, however, to stress the precursor fatty acids balance for thromboxane production.

Dr Horrobin refers at the end of his letter to our discussion on published reports of the total cholesterol and high density lipoprotein (HDL)-cholesterol lowering effects of polyunsaturated fatty acids. Contrary to his interpretation we did not discuss EPO because it had no effect either on total or on HDL-cholesterol.

In summary, our findings showed no marked effects of serum lipid or fatty acid pattern of rheumatoid patients treated with either EPO or olive oil in a 12 week trial. The effects of olive oil, if any, should be regarded as theoretically more favourable than those of EPO. On the other hand, it is possible that in other types of trial—for example, with longer treatment, with higher doses, with other variables measured—different results might be obtained, as previous publications show. Still we do not believe that evening primrose oil can be propagated as effective medicine in rheumatoid arthritis, though some patients may receive subjective benefit from it.

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Reference
treated with second line antirheumatic drugs. Another problem difficult to overcome, not addressed by Scott and his coworkers but usually encountered by rheumatologists evaluating the way in which patients with RA respond to treatment, is the inherent heterogeneity of the patients included in their studies and consequently the variable response to the different treatment modalities. Similarly problematic is what has been termed by Pullar et al the 'rheumatological impasse', vis-à-vis, the great number of control patients a clinical investigator needs to study to obtain statistically significant results.

What I would like to consider here is the concept of 'disease remission' in rheumatoid arthritis. As mentioned by Scott and coworkers' laboratory indices, particularly raised erythrocyte sedimentation rate, do not always correlate with clinical remission. Furthermore, many of the indices used to estimate the response to drug treatments, both laboratory and clinical, do not have a clear correlation with the radiological progression of the RA lesions. We have recently approached this matter (Cabral et al, unpublished data) by reviewing hand x rays of patients with RA taken during disease activity and after at least two years of clinical remission. We sought changes that could be attributed to bone remodelling in the metacarpophalangeal joints and in the styloid processes. The distal interphalangeal joints of the hands served as control for primary osteoarthritis. We reasoned that if patients were in sustained longstanding clinical remission the post-inflammatory anabolic response would then take over and repair the connective tissue destruction caused by the rheumatoid process.

At the conclusion of our study we were especially impressed by the great number of patients who had radiological evidence, not present at the time of disease activity, of bone repair in the films taken when on remission. This was manifested by symmetrical osteophytes at the metacarpophalangeal joints and bone apposition on the styloid processes. We concluded that this was evidence of 'radiological remission' and that our patients had probably also attained what I will term here a 'biochemical remission' as the changes included signs of postinflammatory bone repair, which would not have occurred if a clinically silent inflammatory catabolic process was still in progress.

Thus I would like to propose here that the concept of remission in rheumatoid arthritis might now be expanded to include the notion of 'radiological remission' and, perhaps in the near future and as technology permits its definition, that of a biochemical remission. Should our goal in treating patients with RA be that of achieving a laboratory remission, we would certainly be doing fine. It would also be relatively easy to be content only with ridding our patients with RA of the pain and suffering caused by their disease without heeding continuing joint destruction. On the other hand, if our ultimate goal in the management of RA is to eliminate the proliferative synovitis and to attain a true biochemical remission, and with it to stop joint destruction and preserve function, we still, no doubt, have a great task ahead of us.

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References