LETTERS TO THE EDITOR

Osteoarthritis: definitions and criteria

Sir: The American College of Rheumatology (formerly the American Rheumatism Association) subcommittee for classification criteria of osteoarthritis respect the opinions expressed by Drs McAlindon and Dieppe in their editorial.[1] They raise important issues about the use of criteria in general and those for osteoarthritis (OA) of the knee in particular.[2–4]

In their editorial they correctly state the purpose of the criteria for classification: 'providing a descriptive framework in reporting OA to assure consistency of patient selection and thereby improve communication'. They conclude, however, that the proposed criteria are faulty and therefore should not be applied (and presumably not tested). They also state 'there should be better ways forward' but do not state how.

The critique lists the following as 'shortcomings':

Choice of controls: Fifty per cent of the comparison group had rheumatoid arthritis (RA). We consider this a strength rather than a weakness—in a rheumatic disease practice the comparison group if based on consecutive entry or an appropriate control group is heavily weighted towards RA. Testing against controls without RA (half the control group), however, resulted in very similar criteria.

Subjects and controls were not matched for age and sex: The protocol required subjects to have knee pain. No other variable was matched as a variable on which one matches cannot subsequently appear as a disease discriminator. To emphasise the deficiency of McAlindon and Dieppe's idea of matching for additional variables, if we matched for joint space narrowing and osteophytes, radiographic findings of joint space narrowing or osteophytes could never appear as criteria. The argument is further neutralised by results of the decision trees. Age was not selected as a primary variable, and none of the trees selected sex. McAlindon and Dieppe fail to appreciate the discriminant value of the applied statistical methodology (recursive partitioning).

The use of osteophytes as criteria: The prevalence of osteophytes in the absence of OA is unknown. Similarly, the prevalence of knee pain with osteophytes in the absence of OA is unknown, but we suspect that it is distinctly uncommon.

The criteria are circular: Classification criteria of the rheumatic diseases suffer innately from circularity as the diseases are of unknown cause. We are not aware of another method to develop criteria. Listing the characteristics of the disease is mandatory. Circularity is mitigated by testing.

The criteria have not been validated: 'Validation' was not defined, but Altman *et al* clearly reference criteria used (other than pain and stiffness),[2] which have been validated in the past, including crepitus.[5]

Cartilage damage is not a criterion: McAlindon and Dieppe fail to distinguish clinical disease from pathological changes of cartilage. Currently there is no substitute for tissue to document cartilage damage. Unfortunately, it is rarely practical for the clinician to obtain tissue for diagnosis. Medicine is replete with inferences of disease by clinical and laboratory examination. Must one obtain a cardiac muscle biopsy specimen for a diagnosis of a myocardial infarction in the presence of chest pain, electrocardiographic changes, and cardiac enzyme increases?

A recent communication by Dr Dieppe and coworkers on bone resorbing properties of synovial fluid highlights some of the issues of the use of classification criteria.[6] The investigators used the American College of Rheumatology criteria for RA to select their patients with RA. They then stated that patients with OA were selected on the basis of 'typical clinical and radiologic features'. What is meant by 'typical'? Why the inconsistency of criteria for one disease and vague terminology for the other?

The American College of Rheumatology criteria for OA should be considered as an organised attempt to define clinical variables that separate OA of the knee from other conditions, in the absence of a 'diagnostic test'. It is felt that '. . . We should not abandon our theories lightly, for this would involve too uncritical an attitude toward tests, and would mean that the theories themselves were not tested as rigorously as they should be'.[7] Karl Popper, the most critical of philosophers, believed a scientific theory must be proved false to be relinquished. Lindblad tested the criteria by arthroscopy on patients in whom the diagnosis of OA of the knee was uncertain—he found the decision trees reliable.[8 9] Let us continue to evaluate these proposed criteria and improve them using appropriate scientific methods. Classification criteria are not 'etched in stone' as shown by changes in the classification criteria for rheumatic fever, rheumatoid arthritis, and systemic lupus erythematosus.

In conclusion, the OA criteria of the knee should not be condemned arbitrarily and without vigorous testing.

R D ALTMAN, D A BLOCK,
K D BRANDT, D V COOKE,
R A GREENWALD, M C HOCHBERG,
D S HOWELL, R W IKE,
D KAPLAN, W KOOPMAN,
T A MEDSGER Jr, R RAMSEY-GOLDMAN
The Diagnostic and Therapeutic Subcommittee on the Classification of Osteoarthritis of the American College of Rheumatology

Correspondence to: Dr Roy D Altman, Chairman, ACR OA Criteria Subcommittee, University of Miami School of Medicine, Arthritis Division (D-26), Department of Medicine, PO Box 016960, Miami, Florida 33101, USA.

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Assessment of rheumatoid arthritis

Sir: Dr Larsen,[1] referring to a recent viewpoint article,[2] says that some workers have apparently changed their minds about the assessment of rheumatoid arthritis (RA). I think the comment is directed at me and am glad of an opportunity to reply.

Table 2 of the viewpoint article shows the consensus view was that for assessing RA over one to two year periods 'clinical and laboratory indices of disease activity' were appropriate. This is not in conflict with views expressed by us,[3] and to which Dr Larsen refers. There are small differences in matters of detail. Dr Larsen specifically mentions 'clinical score'. We proposed this years ago[3] and later showed that there was a high degree of similarity between it and some other clinical measures.[4] Which method to use is therefore a matter of personal choice; I still prefer 'clinical score', but a consensus meeting is not the place to promote individual preferences. Which laboratory tests to use is, similarly, best decided by personal preference.

Two more difficult problems are how to assess RA over periods exceeding two years and also the place of *x* rays. With regard to the first, I still believe that the clinical/laboratory approach is an essential background. It must be said, however, that as time goes by some extra guides become increasingly necessary; I was in agreement with the views about this expressed at the meeting and set out in the viewpoint. In particular, the morbidity assessment suggested seems likely to be useful.

On the question of *x* rays, Dr Larsen must surely concede that there are at least two difficulties; firstly, the correlation between *x* ray change and change in overall function is not very high; secondly, *x* ray changes in, for example, the hands, do not reflect the impact of changes in a big joint. Hence the comment that less value is now placed on *x* rays. Nevertheless, I suspect that most people, uncertain about the progression of RA or the effects of a drug in a particular patient, will still be influenced by *x* ray findings; and I do not think *x* rays will be abandoned as part of the methodology of trials.

The viewpoint did not, it seems to me, point to changes of mind; the meeting did provide a useful forum where ideas, shaped by experience, could be re-examined and perhaps refined—then submitted for wider appraisal.

B McCONKEY
Dudley Road Hospital
Birmingham B18 7QH

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