Aristea Papageorgiou¹, Athanasios G. Tzioufas¹ and Michael Voulgarelis¹

¹Department of Pathophysiology, Medical School, National University of Athens, Greece.

Accepted 17 January 2012

Correspondence to: Michael Voulgarelis, Department of Pathophysiology, Medical School, National University of Athens, 75 Mikras Asias Street, 11527 Athens, Greece.

E-mail: mvoulgar@med.uoa.gr

References


Rheumatology 2012;51:1340–1341

doi:10.1093/rheumatology/kes044

Advance Access publication 28 March 2012


Sir, The lack of specificity of the new American College of Rheumatology/European League Against Rheumatism (ACR/EULAR) criteria for classification of RA [1] may have suffered its first casualty [2]. Periarticular osteopenia has classically been considered part of RA [3, 4], Alves et al. [2] were unable to distinguish any difference in periarticular bone density using dual-energy X-ray absorptiometry (DEXA) averaging of three and four MCP joints of the most affected hand. There appears to be four possible explanations:

(i) There is no significantly increased occurrence of periarticular osteopenia in RA. This is contrary to observations in definitively diagnosed RA [5].

(ii) Given the study entry criteria of one swollen joint or pain or loss of motion in at least two joints, there may have been limited MCP joint involvement. If periarticular osteopenia has any relationship to inflammation, the normal density of unaffected joints may have camouflaged the periarticular osteopenia in an afflicted joint. This could simply represent an averaging artefact.

(iii) DEXA averaging of three or four joint groups may not have the spatial resolution afforded by examination of standard X-rays. Localization of DEXA regions of interest (ROIs) variably includes diaphyseal bone adjacent to the peri-articular region [2]. This again could simply represent an averaging artefact.

(iv) Lack of specificity of ACR/EULAR criteria may be responsible [1], as other forms of polyarthritis (e.g. SpA) do not appear excluded. Even before proposal of these new criteria, there has been controversy as to which criteria are appropriate [6], with some lumping polyarticular inflammatory arthritis whereas others split off those who have subchondral (rather than solely marginal) erosions. The arachological record [7] and biomechanical engineering studies [8, 9] support the splitters, as the split-off group has characteristics indistinguishable from other individuals diagnosed with SpA [6]. Fifty per cent of the split-off and SpA groups do not manifest periarticular osteopenia and may actually have new bone formation (increased density).

All four possibilities should be considered. If possibilities (ii) and (iii) explain the findings, then DEXA would appear to have no role in addressing the question of periarticular osteopenia. If the first possibility explained the observations by Alves et al. [2], there may have been no reason to even perform the study. However, the most likely explanation may be the lack of specificity of entry criteria. The ACR/EULAR certainly are most helpful for making the diagnosis of RA that many insurance companies (at least in the USA) require for prescription of biologic agents. This solves the physician’s patient care dilemma, as uSpA has not been one of the insurance company criteria for allowing such therapy. However, lumping disparate diseases may be compromising our ability to understand their nature.

Disclosure statement: The author has declared no conflicts of interest.

Bruce Rothschild¹,²

¹Northeast Ohio Medical University, Rootstown, OH and ²Biodiversity Institute, University of Kansas, Lawrence, KS, USA.

Accepted 3 February 2012

Correspondence to: Bruce Rothschild, Biodiversity Institute, University of Kansas, Lawrence, KS 66045, USA.

E-mail: bmr@ku.edu

References

1 Aletaha D, Neogi T, Silman AJ et al. 2010 rheumatoid arthritis classification criteria: an American College


Sir, We read the letter by Rothschild with great interest [1]. He offers a different view on our article. However, we would not say that the new ACR/European League Against Rheumatism (EULAR) criteria have suffered their first casualty, as we merely stated in the introduction that we set out to see whether periarticular osteoporosis as measured by DXA using our technique could be an imaging technique useful to further improve early diagnosis [2]. In the methods, it is clearly stated that we used the 1987 ACR criteria to define established RA [3]. The new criteria were not used in this article, and therefore we cannot draw conclusions towards the specificity or lack thereof of the new ACR/EULAR criteria. We do agree that osteoporosis is one of the characteristics of RA [4]. However, BMD values in our study between healthy controls, early arthritis and RA were overlapping. This means in diagnostic test terms that DXA does not discriminate between patients and healthy controls, as we explained in figure 2 of our paper.

The second point refers to our entry criteria and the possibility of unaffected joints averaging the afflicted joints. As described in our introduction, we were well aware of this difficulty. A previous study showed that including smaller regions of interest (ROIs) caused large coefficients of variation (CVs) [5]. We therefore first aimed to size the ROI as small as possible, but not too small to keep low CVs, enabling us to detect small differences in BMD.

Another related point is that patients were not selected based on joint involvement. The aim of our study was to develop a diagnostic tool that could be applied to all patients at risk for RA, and not only to those with MCP involvement. If one would like to study the aetiology of RA and its consequences on bone loss in individual joints, Dr Rothschild is absolutely right about the relationship between affected joints and BMD loss.

Disclosure statement: The authors have declared no conflicts of interest.

Celina Alves1, Jolanda J. Luime1 and Edgar M. Colin1,2

1Department of Rheumatology, Erasmus MC, University Medical Center Rotterdam, Rotterdam and 2Department of Rheumatology, Ziekenhuis Groep Twente, Almelo, The Netherlands. Accepted 8 March 2012

Correspondence to: Celina Alves, Department of Rheumatology, Erasmus MC, University Medical Center Rotterdam, PO Box 2040, 3000 CA Rotterdam, The Netherlands. E-mail: c.alves@erasmusmc.nl

References


