Response to: 'Correspondence on 'Role of joint damage, malalignment and inflammation in articular tenderness in rheumatoid arthritis, psoriatic arthritis and osteoarthritis" by Dumoulin *et al*

We thank Dumoulin *et al* for their interest in our paper.[1] Validation of research findings is an important step especially in clinical research, where results have implications for clinical decisions. The conclusion of our paper was that tenderness in non-swollen joints should be considered as a symptom of inflammation in early rheumatoid arthritis (RA) and psoriatic arthritis (PsA).[2] On one hand, the results of Dumoulin *et al* support our data with a different imaging method magnetic resonance imaging (MRI); on the other hand, they extended our observation to an even earlier cohort: that of clinically suspect arthralgia (CSA), defined as symptom duration <1 year, symptoms of metacarpophalangeal (MCP) joints, morning stiffness duration ≥60 min, most severe symptoms in early morning, first-degree relative with RA, difficulty with making a fist and positive squeeze test of MCP joints.[3] While the fact that they assessed only MCP joints poses a limitation to their findings, as evidenced by the fact that in most patients with CSA who later developed inflammatory arthritis, the joints involved were not MCP joints, but at the same time the investigators are commended for evaluating also periarticular findings (which were not considered in our study), as well as self-reported pain in MCP joints which also confirmed the association thereof with subclinical inflammation. Their analysis provides further confirmation that tenderness may indeed imply an ongoing inflammatory process in or around a joint in the early stages of arthritis. It should be noted, however, that only a small portion of CSA patients with tender joints revealed subclinical inflammation on MRI, and indeed in our study the majority of tender non-swollen joints (irrespective of whether patients had RA, psoriatic arthritis or osteoarthritis) failed to show Doppler signal. We have demonstrated that among other factors, structural damage, in particular joint space narrowing in patients with RA and joint malalignment and erosions in those with psoriatic arthritis were associated with tenderness.[2] As both ultrasound and MRI are more sensitive in detecting structural damage than conventional X-ray[4] (or for that matter clinical examination), these imaging techniques might have utility in this regard, in particular in patients with early disease who are less likely to exhibit signs of extensive joint destruction. In summary, the findings of both studies support extending the use of ultrasound and MRI beyond established disease[5 6] to CSA and early arthritis in symptomatic, but clinically not swollen joints.

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