

Response to: 'The significance of the squeeze test to identify arthritis was underestimated or not?' by Luo *et al*

With interest we read the letter of Luo, Zeng and He.¹ Our recent study² evaluated the diagnostic accuracy of the squeeze test to identify arthritis. Evidently, Luo *et al* are disappointed by the test characteristics and the sensitivity of the test to identify arthritis in particular; the sensitivity was around 50%.¹ We completely agree with Luo *et al* that the sensitivity found was lower than we had anticipated at the study start. The squeeze test is advocated by experts. Also we are educated that the squeeze test is useful to screen for the presence of arthritis. But, surprisingly, there were almost no data on the diagnostic accuracy of the squeeze test. That hiatus prompted us to perform our study.

Luo *et al* seem to have misunderstood the selection criteria. Patients with apparent arthritis or patients with arthralgia without arthritis were not excluded. In contrast, the patients studied had arthralgia that was suspected to progress to arthritis or clinically apparent arthritis. Patients referred with arthralgia that had other diagnoses (eg, fibromyalgia, osteoarthritis) were not studied, as we did not consider the squeeze test relevant in these patients.

The reference used in our study was arthritis, detected either by physical examination of joints or by MRI. Luo *et al* suggest that the results of the squeeze test will be different for patients with rheumatoid arthritis (RA) and other forms of arthritis. The reference in our study was not the diagnosis of RA. In line with this, we did not evaluate whether the squeeze test is able to differentiate patients with RA from other patients with arthritis.

The authors suggest that the sensitivity of the squeeze test may increase if the test is applied at both hands and feet. This is an interesting suggestion. Because of the lack of scientific data on the diagnostic accuracy of the test, we certainly welcome further studies on this subject. Another suggestion to improve the sensitivity was to repeat the test over time. The relevance of this idea also needs to be addressed in future studies.

In conclusion, we absolutely do not recommend abandoning the squeeze test. The test is easy to perform, costs little time and is cheap. These are important features of a screening test and

this makes the test very useful for general practitioners (GPs). However, the sensitivity of the test was moderate. Based on this we recommend that if there are other reasons for a GP to suspect a patient of having (imminent) arthritis or RA, referral should not be omitted because of a negative squeeze test. More studies on the diagnostic accuracy of the squeeze test need to be performed. At present no study has evaluated the diagnostic accuracy of this test in general practices. In addition it will be relevant to determine if the sensitivity can be increased if results of other tests are added to the result of the squeeze test.

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