Answer to the Editorial of J. O'Dowd and A. Casey

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We would like to thank the authors of this editorial for their very thorough and balanced editorial.

One of the concerns highlighted by the authors of the editorial is the hype in the media, and I can assure you that it was a great surprise to the authors of these papers as well. The study was published in e-pub in February 2013, and the interest from the press and the scientific society was non-existent. We then became worried that the science related to chronic back pain caused by Modic changes would be ignored, as was the discovery of *Helicobacter* in peptic ulceration. Following that discovery there was a shockingly slow decline in gastric surgery. It took more than a decade before the news that you could treat stomach ulcers with antibiotics as opposed to removing the stomach surgically was widely spread. Therefore, in conjunction with the studies being presented for the medical community at the Royal Society of Medicine in London, the press was invited to attend; six journalists attended, and the researchers were rather disappointed about this apparent lack of interest. However, these six journalists started an avalanche, which got completely out of our control. I have no idea how we could have been able to control this and I am certain that no one else has figured out how to do this either in today's communication age and almighty presence of social media.

We do agree with the authors regarding most of their comments. It is indeed necessary that the surgical and scientific communities should have a more tempered and objective response to our studies and that much remains to

be done. The clinical trial needs to be replicated in a different clinical and scientific setting, and we are aware of several groups in Europe, which are far along in the planning stages of additional trials. The study was not underpowered when comparing antibiotics and placebo, but when comparing single and double-dose regimes a larger population is necessary. We also think that other antibiotics or combinations of antibiotics should be studied. The follow-up study on our paper [1], where MIC are being explored, indicates that possibly other antibiotics should be used instead of amoxicillin (study in press). The lack of spontaneous change in clinical outcome measures in this study in the controlled group with untreated Modic changes has been seen before [2]. We agree that it would also be interesting to see if the results could be replicated in back pain sufferers who have Modic type 1 changes, but have not had a documented disc herniation.

We do not agree that it should be common practice to perform a biopsy and culture of the disc before treatment with antibiotics. We have carried out several attempts to do this and not found any surgical tools, in which you could safely, surely and efficiently extrude a sufficient amount of disc material. The procedure has to be performed in three-dimensional X-ray on a semi-sedated patient, and it exposes the patient to another risk infection. Furthermore, it is far from pain free in a number of patients. Additionally, the culture techniques are difficult and only mastered by a few laboratories.

As we point out in our own paper, we do agree with the authors of the editorial that at the moment the only patients that should be considered for a course of antibiotics outside the environment of a clinical trial are those with:

1. low back pain of more than 6 months' duration that has not responded to exercise therapy;

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2. a symptomatic disc herniation within the previous 2 years;
3. Modic type 1 changes at the same level as the disc herniation.

The time since herniation in the authors' response is 1 year, but in our study it was 2 years and we do believe that this is more correct.

Conflict of interest None.

References

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