**Answer to the Letter to the Editor of Zafar Ahmad et al.
concerning “Antibiotic treatment in patients with chronic low
back pain and vertebral bone edema (Modic type 1 changes):
a double-blind randomized controlled trial of efficacy”
by Albert HB et al., Eur Spine J (2013) 22:697–707**

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Thank you for your comments; we are happy that our papers have stimulated scientific discussions in the world of back science.

Your question as to which drug to use is a very important and crucial question. You find it, “odd that we used co-amoxiclav to treat the infection, when clavulanic acid has little disc penetration. Amoxicillin would have been more logical, as it has a narrower spectrum, and is known to be effective against *Propionibacterium acnes*, although it too has poor penetration of the intervertebral disc”

The answer is twofold. First, three independent international experts in infectious diseases were presented with the bacterial culture results of Stirling’s study [1] and all three recommended Amoxicillin-clavulanate. Second, we agree with you that clavulanic acid is most probably superfluous, but at the time of the planning of the study we were not able to obtain pure Amoxicillin. We therefore had no choice but to use co-amoxiclav.

In the question regarding penetration, your reference 7 our Ref. [2] did find levels of both amoxicillin and clavulanic acid in the discs. The paper concludes that these antibiotics do not penetrate into discs as well as gentamicin, but we believe that levels of amoxicillin achieved would be effective against *P. acnes*. We based this view on

an earlier study by Housden and Sullivan [3] that showed that augmentin (Amoxicillin-clavulanate) does penetrate discs, although to a limited extent. In making our choice of antibiotics we needed safe oral agents. Although we were aware that gentamicin penetrates discs well, it would not have been suitable for the study and not for *P. acnes* (an anaerobic organism). Similarly injectable cephalosporins (the accepted choice for prophylaxis in spinal surgery) would not have been suitable for the study where extended periods of oral delivery were needed.

We agree that in the perfect study we could have taken skin swabs during surgery, but we relied on the efficacious skin cleansing techniques (2 % chlorhexidine in 70 % isopropanol) that have been developed at Aston University where this cleansing technique has shown in thesis by Crosby [4] to be more significantly more efficacious than other skin cleansing techniques in both superficial and deep incisional infections. This was confirmed by the main clinical trial that was carried out in USA comparing chloraprep with aqueous chlorhexidine and was published in the New England Journal of Medicine in 2010 [5]. These techniques were used in both Stirling’s study and ours. We therefore consider the risk of contamination to be minimal.

Conflict of interest None.

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