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LETTER TO THE EDITOR

Letter to the editor 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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Dear Sir,

The paper by Albert et al. [1] has stimulated great interest amongst spinal specialists. The basis to support the use of antibiotics to be effective for back pain by Albert et al. [1] was taken from several different papers, of which we highlighted a few. Stirling et al. [2] published a letter reporting the use of a serological test to check for deep-seated infection in patients presenting with sciatica (43 out of 140 were positive). They also cultured disc material from 36 patients undergoing microdiscectomy for sciatica (19 out of the 36 were positive; 16 were *Propionibacterium acnes* (*P. acnes*). Disc material from patients operated for scoliosis ($n = 3$), trauma ($n = 3$), myeloma ($n = 2$), and degenerative disc disease ($n = 3$), had negative cultures. Agarwal et al. [3] published an abstract where microdiscectomy samples from 59 patients found positive cultures in 10 samples, of which 7 grew *P. acnes*. Albert et al. [4] in their own previous paper found 28 out of 61 patients' discs were positive for bacteria.

Our concern is that there is no mention of control samples taken from skin or the theatre air to check for possible contamination. Some of these papers cited by Albert et al. [1] did not state what specifics of the operation e.g. pre-operative antibiotic or skin preparation were used.

There are several papers which do not support Albert et al. [1] hypothesis and have suggested that *P. acnes* found in discs is a skin contaminant. Carricajo et al. [5] study of 54 patients found four with positive cultures, of which two were *P. acnes*. Cultures from the skin and soft tissues also grew the same bacteria in each of the four cases. McLorinan et al. [6] reported 15 out of 75 samples identified bacteria using immunofluorescence microscopy. They suggested that the bacteria in the disc was related to skin flora based on the phenotype seen under immunofluorescene microscopy, and was dissimilar to deep-seated infection, such as that seen around hip prosthesis. Both these papers conclude that *P. acnes* is a contaminant.

It is odd that Albert et al. [1] used co-amoxiclav to treat the infection, when clavulanic acid has little disc penetration [7]. Amoxicillin would have been more logical, as it has narrower spectrum, and is known to be effective against *P. acnes*, although it too has poor penetration of the intervertebral disc [7].

We concur with the editor of this journal as mentioned in his article [8] that further work is needed to investigate how and if infection of the intervertebral disc is a cause of back pain.

Conflict of interest None.

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