Reviewer’s report

Title: Extracorporeal shock waves down-regulate the expression of interleukin-10 and tumor necrosis factor-alfa in osteoarthritic chondrocytes

Version: 2 Date: 16 October 2007

Reviewer: Ernst H. H Marlinghaus

Reviewer’s report:

General
The authors present a well written paper on the influence of extracorporeally generated shockwaves (SW) on chondrocytes in-vitro. They show that the metabolism of human chondrocytes can be modified in a way that could be regarded as being protective for damaged cartilage. Given the fact, that this kind of treatment is already performed in patients, also with different kind of pathologies from wound/burn healing to treatment of myocardial ischemia more papers like this are needed to fully elucidate the pathway(s) of SW action on cells. Since SW are mechanical waves, the influence of mechanical forces (shear, stretch) should be investigate in the future as well.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

none

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

The spelling of words like extracorporeal and beta1 should be consistent throughout the text.

In the Abstract, Methods section and throughout the text and legends to the figures

1. Use energy flux density instead of energy fluxes
2....energy levels and energy fluxes. These two parameters are not independent, so change to... energy levels as displayed by the machine and the corresponding energy flux densities...or similar

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Discretionary Revisions (which the author can choose to ignore)

For in-vivo application of SW to the articular cartilage, the limited space available between the adjacent bone surfaces might play a role and should be taken into consideration.
What next?: Accept after minor essential revisions

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I’m an employee of Storz Medical, the manufacturer of the shockwave equipment used.