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LETTER TO THE EDITOR

Comment on Roessler et al.: Short-term follow up after implantation of a cell-free collagen type I matrix for the treatment of large cartilage defects of the knee

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Dear Editor,

It was with great interest that I read the study entitled "Short-term follow up after implantation of a cell-free collagen type I matrix for the treatment of large cartilage defects of the knee" by Roessler and colleagues [6]. However, as my group worked a lot with the same matrix some questions came up:

First I would like to congratulate the authors on having achieved such promising short-term results in cartilage repair. We had comparable results with the predecessor product in patellar defects which was cell based [5]. However, compared to microfracture there were no benefits detectable in our series.

Our first question is: did the authors cut the constructs' bottom or surface during implantation? With the same product we demonstrated that removing the superficial layer is essential to ensure proper ingrowth of cells into the matrix. Next, compressed hydrogels contribute better to cartilage regeneration after surface modification [3].

To avoid delamination sometimes fibrin glue is used during implantation. However, similar to our own results the group reports no beneficial effects using fibrin glue [1, 4]. Despite the lab setting this does not reflect OR reality. So, did the authors apply fibrin glue, sutures or other devices in some cases to fix the constructs during surgery?

Cell ingrowth into the scaffold is strongly dependent on the implantation technique chosen and on the hypothesis one follows in regards to the cells' origin. However, this has not been fully clarified yet. Why do you think surface modification is essential? Please explain the exact surface modification process performed with the scaffold referred to in Guenther et al. [3].

And finally what is the precise cut-off for distributing patients between large and small defects compared to the previously published series using the same technique [2, 7]?

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