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LETTER TO THE EDITOR

Tissue engineering as a potential alternative or adjunct to surgical reconstruction in treating pelvic organ prolapse: reply to Osman et al.

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Dear Editor,

We thank Dr. Osman and collaborators for their positive interest in our recent review on the potential use of tissue engineering techniques for pelvic organ prolapse repair [1]. We agree with their general comments on the use of biocompatible and biodegradable implant materials in combination with cells or tissue to avoid the complications we face today. Numerous tissue engineering strategies have been employed in this and other medical fields and we acknowledge that a synthetic or biological implant made of electrospun polylactic acid or porcine small intestine submucosa in combination with autologous buccal mucosa fibroblasts or lipoaspirate stem cells are potentially interesting combinations although the ideal implant material and cell type or tissue have yet to be established.

Generally speaking, we believe that a synthetic biocompatible and biodegradable material is more attractive than a biological material because it can be manufactured under controlled circumstances and at a low cost and potentially can be engineered to mimic the normal biomechanics of the pelvic floor. Autologous lipoaspirate stem cells indeed are interesting candidate cells. They are able to differentiate into several cell lineages of relevance to pelvic floor repair. The abundance of potential donor tissue and the relatively easy isolation procedure also allow for a strategy using freshly isolated cells instead of cultured cells. Such a strategy would be simple and cost-effective and consequently increase the clinical relevance of the procedure.

Reference

1. Boennelycke M, Gras S, Lose G (2012) Tissue engineering as a potential alternative or adjunct to surgical reconstruction in treating pelvic organ prolapse. Int Urogynecol J 2012. Epub 2012/09/04, doi:10.1007/s00192-012-1927-4

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