

2021/5/7

Dear Editor:

I appreciate that you can read our article carefully and give us many very meaningful comments to improve our manuscript. I am very grateful that you can give me this opportunity. We have revised the article in the light of your opinion. The revision of the article is now sent to you, you can be found those content at the end of this email.

If you have any suggestions and questions, please connect us. It is my pleasure to answer your questions.

Correspondence and phone calls about the paper should be directed to Guo-Xin Ni at the following address, phone and fax number, and e-mail address :

Guo-Xin Ni

School of Sports Medicine and Rehabilitation, Beijing Sport University, Beijing 100084, China.

E-mail:fjrehab@163.com

Thanks again for your meaningful comments.

Sincerely,

Guo-Xin Ni

School of Sports Medicine and Rehabilitation, Beijing Sport University, Beijing 100084, China.

E-mail:fjrehab@163.com

Response to comments from Reviewer 1

Comment 1-you must revise the abstract with a special focus on stem cells.

Response. Thanks very much for the suggestion. We incorporated the points as you suggested in the abstract and as follow: Tendon-bone insertion injuries such as rotator cuff and anterior cruciate ligament injuries are currently highly common and severe. The key method of treating this kind of injury is the reconstruction operation. The success of this reconstructive process depends on the graft's ability to incorporate into the bone. Recently, there has been substantial discussion about how to enhance the integration of tendon and bone through biological methods. Stem cells like bone marrow mesenchymal stem cells, tendon stem/progenitor cells, synovium-derived mesenchymal stem cells, stem cells from adipose-derived, or periosteum-derived periosteal stem cells can self-regenerate and potentially differentiate into different cell types which have been widely used in tissue repair and regeneration. Thus, we concentrate in this review on the current circumstances of tendon-bone healing stem cell therapy.

Comment 2- also you must add 2 paragraphs in your manuscript: in one paragraph, define stem cells generally, then explain stem cell classification, and finally, focus on stem cell that uses in the therapy of tendons (such as mesenchymal stem cells). in another paragraph, you must define the use of other sources of mesenchymal stem cells(such as placenta and so and) in stem cell therapy of tendons

Response. Thanks very much for the suggestion. The suggestion is very meaningful for us to improve our manuscript. At present, placenta mesenchymal stem cells are not used in tendon bone healing, the most widely used are MSCs obtained from synovium, periosteum, and adipose tissues. We incorporated the points as you suggested in the TYPES OF STEM CELLS section and as follow: Numerous sources for stem cells are available and so stem cells can also be classified according to their origin tissue: embryonic stem cells, fetal stem cells, umbilical cord stem cells, and adult stem cells. There are currently two principal types of clinically promising adult stem cells: hematopoietic stem cells (HSCs) and mesenchymal stem cells (MSCs). Several recent studies reports have shown that MSCs are obtainable from synovium, periosteum, and adipose tissues, which have been widely used in tendon to bone repair

Response to comments from EDITORIAL OFFICE

Comment 1. (1) The authors did not provide original pictures. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor; and (2) Please obtain permission for the use of picture(s).

Response. Thank you for your suggestion. We provide a PowerPoint for you to reprocessed. Our picture is original, we permit to use this picture.

Answering reviewers to re-review:

Dear Editor:

I appreciate that you can read our article carefully and give us many very meaningful comments to improve our manuscript. I am very grateful that you can give me this opportunity. We have revised the article in the light of your opinion. The revision of the article is now sent to you, you can be found those content at the end of this email. If you have any suggestions and questions, please connect us. It is my pleasure to answer your questions.

Response to comments from Online Science Editor Comment 1-Thanks for your revision. I request you to define the use of other source of MSCs in stem cells therapy of tendon in separate paragraph. You emphasize that placental derived mesenchymal stem cells have not been used for stem cells therapy of tendon. Studies have shown that human placenta-derived mesenchymal stem cells with strong proliferative ability have rich sources and can remarkably promote tendon-bone healing after cell transplantation, for example this study in a preclinical setting use PDMSCs. DOI: 10.3969/j.issn.2095-4344.2013.49.012

Response: Thanks very much for the suggestion. The suggestion is very meaningful for us to improve our manuscript. We read the study you suggested carefully (DOI: 10.3969/j.issn.2095-4344.2013.49.012), Yang et al used human placenta-derived mesenchymal stem cells on a rat tendon-bone healing model. They found that human placenta-derived mesenchymal stem cells can accelerate early tendon-bone healing in a bone tunnel and strengthen the biomechanical strength. We incorporated the points as you suggested in the TYPES OF STEM CELLS section and as follow: One study has shown that human placenta-derived mesenchymal stem cells with strong proliferative ability have rich sources and can remarkably promote tendon-bone healing in a rat model after cell transplantation, but the ethical and legal issues arising from human placenta-derived mesenchymal stem cells making it difficult to perform more trials. It still needs more evidence to confirm the efficiency of placenta-derived mesenchymal stem cells on tendon-bone healing.

Correspondence and phone calls about the paper should be directed to Guo-Xin Ni at the following address, phone and fax number, and e-mail address: Guo-Xin Ni School of Sports Medicine and Rehabilitation, Beijing Sport University, Beijing 100084, China. E-mail:fjrehab@163.com Thanks again for your meaningful comments. Sincerely, Guo-Xin Ni School of Sports Medicine and Rehabilitation, Beijing Sport University, Beijing 100084, China. E-mail:fjrehab@163.com