

Revelation of a extra-cellular matrix and innervations. Of the nerve to the muscle at the time of the muscular tissue repair accompanied by therap eutic exercise

メタデータ	言語: jpn 出版者: 公開日: 2021-10-15 キーワード (Ja): キーワード (En): 作成者: Haida, Nobuhide メールアドレス: 所属:
URL	https://doi.org/10.24517/00063809

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2001 Fiscal Year Final Research Report Summary

Revelation of a extra-cellular matrix and innervations. Of the nerve to the muscle at the time of the muscular tissue repair accompanied by therapeutic exercise

Research Project

Project/Area Number

12832016

Research Category

Grant-in-Aid for Scientific Research (C)

Allocation Type

Single-year Grants

Section

一般

Research Institution

Faculty of Medicine, Kanazawa University

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Project Period (FY)

2000 - 2001

Keywords

Muscle repair / Therapeutic exercise / Extracellular matrix / Myoblast / Nerve innervation

Research Abstract

From a functional viewpoint, a repair of the muscular tissue is an important problem on rehabilitation medicine. We examined a role of the therapeutic exercise in the muscular tissue repair. The therapeutic exercise from immediately after a muscle damage induces the activation and proliferation of muscle satellite cell, and earlier appearance of the myotube cell was recognized. And, it became clear that the regeneration of the muscular tissue is accelerated. In the case, fibronectin, laminine and type IV collagen were proved to ambient of the myotube. These extracellular matrix play an important role to the bonding and a shift of the cell. It is conjectured that these are getting involved in a shift and proliferation to a damage site of a myoblast, in order that the constitution of the muscular tissue breaks out in the damage muscle. It is conceivable that even the reinforcement of survival maintenance of the muscle fiber that is not necrosing and resist to the muscle damage to muscle regeneration besides, a control of the proliferation and differentiation of a myoblast is important. Furthermore, reinnervation is essential to regeneration fibrous function acquisition. Also, even extracellular matrix such as laminine and type IV collagen have important relation as an adjustment role of muscle regeneration. Not only muscle regeneration is examined only the regeneration but also we need to recognize the interaction between "the neuromuscular system and the extracellular matrix".

Research Products (9 results)

All	Other
All	Publications

- [Publications] Haida Nobuhide: "Effect of hindlimb re-weighting, low -and high -intensity exercise on disuse atrophy of rat solens muscle"金沢大学医学部保健学科紀要. 24. 1-7 (2000) ▼
- [Publications] Haida Nobuhide: "Adaptation of slow and fast gastrocnemius muscle to isometric exercise in rat"金沢大学医学部保健学科紀要. 24. 39-44 (2000) ▼
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- [Publications] 灰田 信英: "骨格筋の萎縮に対する可逆性の細胞生物学"ポバースジャーナル. 24. 59-62 (2001) ▼
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URL: https://kaken.nii.ac.jp/report/KAKENHI-PROJECT-12832016/128320162001kenkyu_seika_hokoku

Published: 2003-09-16