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再生医療 組織工学的手法を用いた 鼓膜再生療法

Innovative regenerative treatment for the tympanic membrane perforation

金丸 眞一^{1) 2) 3)} 伊藤 壽一⁴⁾

Kanemaru, Shin-ichi^{1) 2) 3)} / Ito, Juichi⁴⁾

1) 公益財団法人田附興風会医学研究所北野病院 耳鼻咽喉科・頭頸部外科

2) 公益財団法人先端医療振興財団 臨床研究情報センター

3) 公益財団法人先端医療センター病院 耳鼻咽喉科

4) 滋賀県立成人病センター研究所

1) Department of Otolaryngology-Head and Neck Surgery, Medical Research Institute, Kitano Hospital

2) Translational Research Informatics Center, Foundation for Biomedical Research and Innovation

3) Department of Otolaryngology Translational Research Informatics Center Foundation for Biomedical Research and Innovation Hospital

4) Shiga Medical Center Research Institute

E-mail : kanemaru@ent.kuhp.kyoto-u.ac.jp

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Summary

153 chronic TM perforations from 145 patients (Age : 10-91, M=61, F=84) were randomly selected from outpatients with TM perforation. Patients were classified into three groups based on the size of the TM perforation : Grade I (n=40), Grade II (n=66) and Grade III (n=47). After creating mechanical disruption of the edge of the TM perforation, a gelatin sponge was immersed in b-FGF placed over the perforation. Fibrin glue was dripped over the sponge. The effectiveness of this therapy was evaluated 3 weeks after treatment. Complete closure of the TM perforation was achieved in about 90% within 4 treatment cycles. The average hearing levels of all patients with successful TM repair was improved. No serious sequelae were observed in any patient. This study demonstrates that a combination of gelatin sponge, b-FGF and fibrin glue enables to regenerate the TM without conventional operative procedures. This regenerative therapy is an easy, safe, cost-effective and minimally invasive treatment.

はじめに

種々の原因による鼓膜穿孔の閉鎖に対してこれまで

様々な治療がなされてきた。しかし、現行の治療法は鼓室形成術や鼓膜形成術といったそのほとんどが手術療法であり、皮膚切開と自己組織採取などの創傷を伴