

# Development of standard care evaluation of pressure ulcers by the molecular biological approach

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# 2006 Fiscal Year Final Research Report Summary

## Development of standard care evaluation of pressure ulcers by the molecular biological approach

Research Project

### Project/Area Number

17592200

### Research Category

Grant-in-Aid for Scientific Research (C)

### Allocation Type

Single-year Grants

### Section

一般

### Research Field

Fundamental nursing

### Research Institution

Kanazawa University

### Principal Investigator

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### Project Period (FY)

2005 – 2006

### Keywords

nursing / clinical / Pressure ulcers / molecular biology

### Research Abstract

The purpose of this study was investigated the change in cytokines in refractory pressure ulcers and relationship between its changing and wound healing process. We investigated cytokines in pressure ulcers and wound change patterns in order to clarify cytokine behaviour at each status. After three days and seven days changing care measurements were performed of the levels in retained exudate of the cytokines; interleukin 1 $\alpha$  and 1 $\beta$  (IL-1 $\alpha$ , 1 $\beta$ ), basic fibroblast growth factor (bFGF), platelet-derived

growth factor-AB (PDGF-AB), interleukin-4 (IL-4), transforming growth factor- $\beta$ 1 (TGF- $\beta$ 1) and vascular endothelial growth factor (VEGF). Wounds were observed weekly. All subjects had consented to participate in the study. Cytokines were increased at each wound change: for undermining adhesion, it was six out of seven (elevation in VEGF at seven three days); for increased granulation, eight out of eight (bFGF at after three days); and for epithelialization also eight out of ten (bFGF at after three days). Standard care evaluation of pressure ulcers was developed from these results. The results of our standard care evaluation were as follow: positive predictive value of bFGF 70.0% and positive predictive value of VEGF 66.7%. Therefore, it was suggested that our standard care evaluation of pressure ulcers was effective.

## Research Products (4 results)

All 2005

All Journal Article

[Journal Article] 高齢者における褥瘡のポケット洗浄液温度の検討

2005 ▾

[Journal Article] 2症例におけるポケットの有無によるサイトカインの比較

2005 ▾

[Journal Article] Analysis of the temperature of the irrigation solution for elderly patients with pressure ulcers with undermining

2005 ▾

[Journal Article] Two case studies ; Whether pressure ulcer with undermining or without undermining were compared by cytokines

2005 ▾

URL: [https://kaken.nii.ac.jp/report/KAKENHI-PROJECT-17592200/175922002006kenkyu\\_seika\\_hokoku](https://kaken.nii.ac.jp/report/KAKENHI-PROJECT-17592200/175922002006kenkyu_seika_hokoku)

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