Nursing Techniques to Prepare a Favorable Local Environment of a Pressure Ulcer: Computer-developed Decision-making Care Algorithm

2003 Fiscal Year Final Research Report Summary

Nursing Techniques to Prepare a Favorable Local Environment of a Pressure Ulcer ; Computer-developed Decision-making Care Algorithm

Research Project

Project/Area Number

13672498

Research Category

Grant-in-Aid for Scientific Research (C)

Allocation Type

Single-year Grants

Section

一般

Research Field

Clinical nursing

Research Institution

Kanazawa University

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Project Period (FY)

2001 – 2003

Keywords

pressure ulcer / nursing techniques / care algorithm / computer system
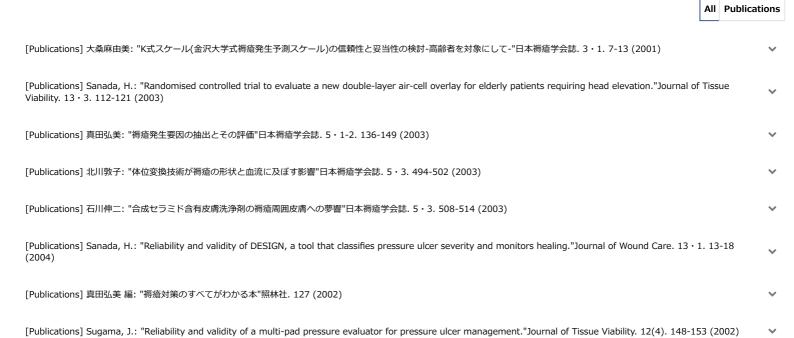
Research Abstract

Introduction : The purpose of this study was to create a pressure ulcer assessment tool and a decision-making care algorithm for pressure ulcers, confirm its validity, and to provide it on a quick and easy-to-use CD-ROM. Method : (1)We handed out a questionnaire to examine the status and factors causing refractory pressure ulcers to 478 experts of the pressure ulcer care. An assessment tool was made from their results (2)To create the decision-making care algorithm we devised a decision tree based on the approach used by the EBN in the literature reviews. (3)The subjects were divided into an experimental group(assessment tool/algorithm group) and a control group.

The effectiveness of integrating the assessment tool and the algorithm(hereafter referred to as "system") was evaluated by comparing their results with the actual process of pressure ulcer healing(using DESIGN and wound area) The cost-effectiveness was also calculated for both groups. To make the "system" more easy tu use, we transferred it to CD-ROM. Results : (1)This assessment tool(using DESIGN and photographs) determines whether the wound is in a refractory state or not. (2)The "system" consists of 43 decision trees that are linked to the assessment tool. (3)Concerning the pressure ulcer healing process, the DESIGN scores were significantly lower and wound area was significantly smaller in the experimental group than in the control group. The cost of wound care was significantly lower in the experimental group than in the control group. The incremental cost-effectiveness ratio was better in the experimental group than in the control group. Discussion and Summary : We are the first to develop a system for professional caregivers that can provide treatment guidance of a pressure ulcer to provide the most suitable care. By implementing this system, our results also showed a faster healing rate, which proved to be more cost-effective in the treatment of pressure ulcers.

Research Products (10 results)

All Other

All Publications

[Publications] 大桑麻由美: "K式スケール(金沢大学式褥瘡発生予測スケール)の信頼性と妥当性の検討-高齢者を対象にして-"日本褥瘡学会誌. 3・1. 7-13 (2001)

[Publications] Sanada, H.: "Randomised controlled trial to evaluate a new double-layer air-cell overlay for elderly patients requiring head elevation."Journal of Tissue Viability. 13・3. 112-121 (2003)

[Publications] 真田弘美: "褥瘡発生要因の抽出とその評価"日本褥瘡学会誌. 5・1-2. 136-149 (2003)

[Publications] 北川敦子: "体位変換技術が褥瘡の形状と血流に及ぼす影響"日本褥瘡学会誌. 5・3. 494-502 (2003)

[Publications] 石川伸二: "合成セラミド含有皮膚洗浄剤の褥瘡周囲皮膚への夢響"日本褥瘡学会誌. 5・3. 508-514 (2003)

[Publications] Sanada, H.: "Reliability and validity of DESIGN, a tool that classifies pressure ulcer severity and monitors healing."Journal of Wound Care. 13・1. 13-18 (2004)

[Publications] 真田弘美 編: "褥瘡対策のすべてがわかる本"照林社. 127 (2002)

[Publications] Sugama, J.: "Reliability and validity of a multi-pad pressure evaluator for pressure ulcer management."Journal of Tissue Viability. 12(4). 148-153 (2002)

[Publications] Sanada, H.: "Randomised controlled trial to evaluate a new double-layer air-cell overlay for elderly patients requiring head elevation."Journal of Tissue Viability. 13(3). 112-121 (2003)

[Publications] Sanada, H.: "Reliability and validity of DESIGN, a tool that classifies pressure ulcer severity and monitors healing."Journal of Wound Care. 13(1). 13-18 (2004)

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