

EVALUATION OF STANDARD DRESSING VERSUS POLYMERIC MEMBRANE FINGER DRESSINGS AND PATIENT OUTCOMES USING PAIN DIARIES

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Introduction:

This poster presents the results of a dressing evaluation in 39 patients that included daily patient pain dairies. A standard dressing was compared to the polymeric finger dressing for wound healing by secondary intention in trauma injuries to fingers in the Accident and Emergency Department in a general hospital and minor injuries unit.

Aim:

Table 1: Aims of the study

Explore the patients' perceptions of pain by using numerical and descriptive pain dairies (Wong & Baker 1998)	Explore how patients' quality of life was affected:- hygiene needs, dressing, ability to work, driving, domestic chores, mobility and hand function.
Monitor the patients' sleep patterns in line with injury and pain	To explore the nurses' perceptions of the dressing change
Monitor prescribed and over the counter analgesia taken	To compare the costs and procedure time using the two dressings evaluated
*All audit data was collated over a 2 week period.	Explore patients pain at dressing change period.

Method:

An audit was undertaken of 39 patients (29 males, 10 females), presenting with finger injuries. Patients were randomly selected from the A&E and minor injury unit. The first 19 patients were given standard dressings (SD) and the following 20 patients were selected to have polymeric membrane (PM) finger dressings. The patients ages ranged from 10 to 82 years. Training was delivered to the staff of the A&E and minor injury unit on how to collate all relevant information. Full written consent was obtained from all patients and they were free to withdraw from the audit at any time. This evaluation was registered with the Clinical Audit Department in accordance with trust protocols.

Table 2: Patient information included:

Age	Sex	Underlying medical conditions
Site and type of finger injury	Pain not related to dressing using numerical rating scale + description Fig 2/3	Pain on dressing change using numerical rating scale + description Fig 1/2
Patient free text dairies up to 14 days	Analgesia prescribe or over the counter drugs taken. analgesia ladder (WHO, 1986).	Sleep patterns

Patients were encouraged to record their perceptions of pain in a daily diary using a numerical pain score (Wong and Baker scale 1998). This pain scale also included pain description (Fig 1/2). Patients were given the opportunity to comment in free text dairies over two weeks. Patients quality of life were collected at the end of the evaluation to see how the dressing had affected their daily life. (Table 1) Nurses commented on dressing performance and ease of application.

Results:

Standard dressing

The standard dressing consisted of non-adhesive contact layer and a cotton tube bandage. This group (n=19) had 6 females & 13 males. The ages ranged from 10 to 80 years. The pain levels continued to be recorded throughout the study (fig 2) This was

Fig1. Accumulated descriptive score of patients on the Standard Dressing

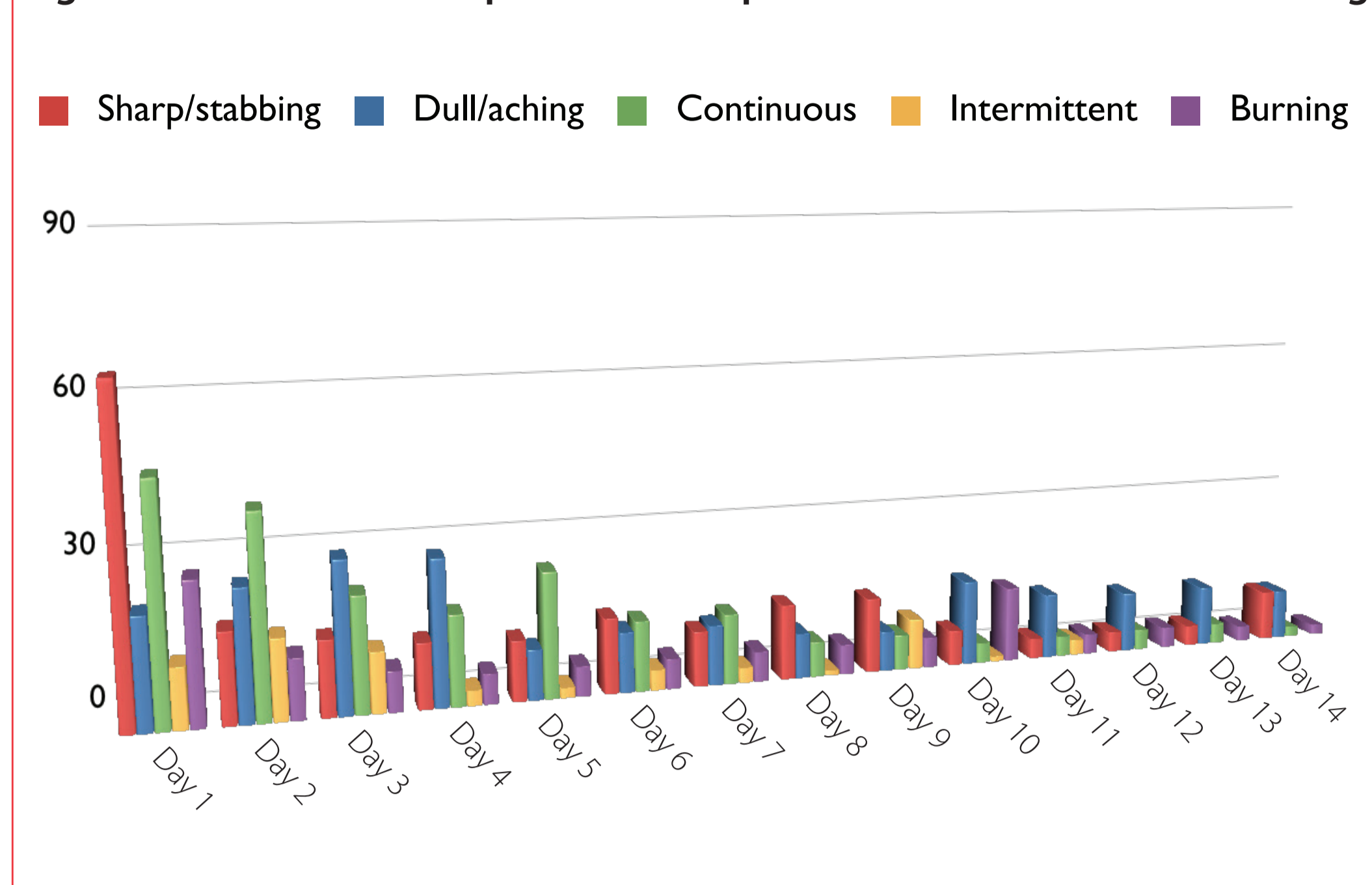


Fig 2. Accumulated descriptive score of patients on the Polymeric dressing

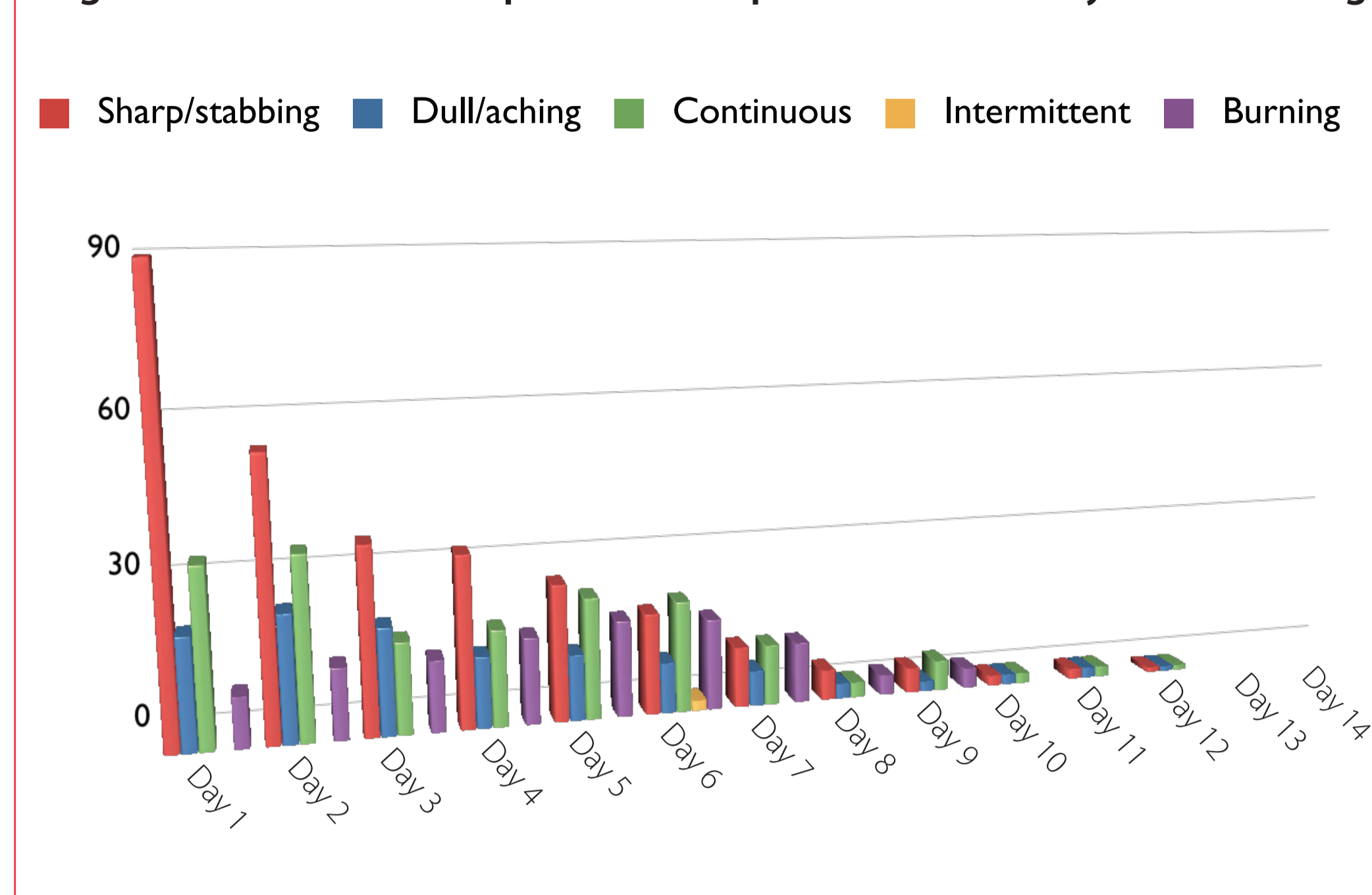


Fig 1 and 2. The Wong and Baker scoring tool in addition to a qualitative description which gave a maximum score of 10 for each category this was added together to give the accumulated scores above. The standard group continued to record pain scores up to and including 14 days.

not statically significant due to the small sample size. The patients sleep patterns were recorded 6 -8 hours. Within 48 hours 4 patients took ibuprofen and 3 patients had paracetamol. Six dressing changes were performed by hospital staff, 5 attended the GP practice and 8 changed the dressing themselves. Patient comments (8/19 patients) found the SD poor or very poor, bulky, and noted that the dressing fell off within a day. Dressing changes were between 1 and 6 days (mean = 2 days). Quality of life was not affected, as patients were able to function as normal and covered the dressing with a plastic bag to shower.

Polymeric dressing

The PM dressing (n=20) 4 females & 16 males. The age range 21-82. The majority of patients recorded 6-8 hours' sleep. Pain decreased at 8 days (Fig 2). Within 48 hours 8 had taken ibuprofen, 7 had paracetamol. Dressing wear time 2 - 6 days (mean = 3.5 days). 7 of the dressing changes were performed by hospital staff, 5 attended GP practice and 8 patients changed the dressing themselves. All 20 patients rated the PM dressing good/ very good, comfortable, conformable, and provided protection. Quality of life in this group; patients were able to function as normal and the dressing allowed them to shower easily without using additional devices.

Conclusion:

The use of patient dairies provided a valuable insight into the quality of life of patients living with trauma induced finger injuries. The experience of pain particularly in sensitive areas such as fingertip injuries exposes nerve endings was worth exploring in this study. (Davies and White 2011) demonstrate the unique properties of the PM dressing reducing somatic pain. Overall the PM dressing was less painful at day 8 compared to the standard dressing (Fig 2). The PM finger dressing was easy to apply and remove and promoted moist wound healing. The SD fell off 1 day after application required frequent dressing changes.

Cost Effectiveness:

Cost effectiveness is not just the unit cost of the product, but the time it takes to remove and reapply (Panca et al. 2013). The cost of the SD is £3.75 and the PM is £2.50; the PM dressing proved to be cost effective in this study.

Case study

A 21 year old car sales man who trapped his finger in a car door 7th November 2013, presented to Accident and Emergency Department, topical iodine skin preparation was applied prior to debridement of devitalized tissue, and PM dressing was applied. Initially this dressing was changed every 3rd day within 8 days patients pain score reduced to 0, there was a notable reduction in bruised tissue within one week, patient totally healed by 25th November.



References:

Davies, S.L., White, R.J (2011) Defining a holistic pain-relieving approach to wound care via a drug free polymeric dressing. Journal of Wound Care 20 (5):25-4. Panca, M., Cutting, K. Guest, J.F. (2013) Clinical and cost-effectiveness of absorbent dressings in the treatment of highly exuding VLU's. Journal of Wound Care 22(3): 108-18. Scott, A., (2013) Involving patients in the monitoring of radiotherapy-induced skin reactions. Journal Community Nursing Vol 27, No 5 p16-22. World Health Organization (1986) Analgesic ladder for treating cancer pain. Geneva, Switzerland: WHO. Available at <http://www.who.int/cancer/palliative/painladder>. Wong, D., Baker, C. (1998) Pain in children: comparison of assessment scales. Pediatric Nurse 14(1): 9-17. Thanks to all the A&E staff at Burton Foundation Trust and Minor Injuries Unit Samuel Johnson. This audit compared Mepitel*, Mölnlycke Health Care, Melolin* Smith & Nephew, tubinette* Mölnlycke Health Care and Polymem* Finger Dressing Ferris MFG CORP.