EVALUATION OF DRESSINGS IN THE CARE OF WOUNDS FOLLOWING ORTHOPAEDIC SURGERY

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INTRODUCTION

In most non-complex surgical wounds, second dressing change occurs via primary intention following the closure of the margins of the wound with sutures or clips.1 Management of the surgical incision site should focus on minimizing wound disturbance, preventing microbial invasion and ensuring patient comfort. This poster reports on the results of a clinical evaluation that was undertaken to compare the performance of different dressing regimes when used on wounds resulting from orthopaedic surgery.

Blistering is a particular concern in orthopaedic surgical patients given that second dressings are commonly applied for extended periods of time and also are commonly applied over a joint, with an increased risk of friction between the skin and the dressing causing a result of joint movement. Blistering can cause increased pain, delayed wound healing and an increased risk of infection. The use of traditional adhesives has been associated with an increased incidence of blistering in patients who have undergone orthopaedic surgery.2

AIMS

The aim of this study was to compare the performance of different dressing regimes when used on wounds resulting from orthopaedic surgery in terms of ease of dressing application/removal, dressing wear time, condition of wound and surrounding skin and dressing-related pain.

METHODS

A total of 201 patients who had undergone hip or knee arthroplasty were enrolled in the study and were monitored prospectively. The first 100 patients were assigned to traditional dressing regimes (alcohol-soaked gauze and tape/film dressing with an absorbent pad). The remaining 101 patients were assigned to treatment with an absorbent dressing incorporating a soft silicone wound contact layer (Mepilex Border Post-Op, Medtronic Healthcare, Sweden).

The following parameters were assessed in both groups: ease of dressing application (on a scale from 1 [very difficult] to 5 [very easy]), dressing wear time (days), condition of wound and surrounding skin (evidence of blistering [including details of where/when size of largest blister/how many blisters were detected]/bleeding at dressing removal)/other skin reactions) and dressing-related pain prior to dressing change, during dressing change and immediately after dressing change (on a scale from 0 [none] to 10 [unbearable])/minimal (low, medium or high). Details of the reasoning for any further dressing changes made other than for routine wound assessment, other skin reactions) and dressing-related pain prior to dressing change, during dressing change and immediately after dressing change (on a scale from 0 [none] to 10 [unbearable]); dressing wear time (days); condition of wound and surrounding skin and dressing-related pain.

RESULTS

Ease of dressing application

Results revealed that the Mepilex Border Post-Op dressing performed favourably in terms of ease of dressing application (see Figure 1). Ease of dressing application was reported to be either ‘easy’ or ‘very easy’ in 100% of patients in the Mepilex Border Post-Op dressing group. There were significantly more patients in the Mepilex Border Post-Op dressing group for whom dressing application was deemed ‘very easy’. (P = 0.001). (P = 0.001).

Dressing changes

In the traditional dressings patient group there were significantly more patients who required further dressing changes other than for routine wound assessment, (P = 0.006) (see Figure 2).

Blister formation

The number of patients presenting with blisters during the study period was very low in both patient groups; 3% of patients developed a blister in the Mepilex Border Post-Op dressing group and 7% of patients developed a blister in the traditional dressings group. All of the blisters in the Mepilex Border Post-Op dressing group were located beyond the limits of the dressing. Comparatively, in the traditional dressings group two (3.6%) of the blisters were located at the wound edges and two (3.6%) were located under the dressing (see Figure 4).

Pain

The mean pain score prior to dressing change in the Mepilex Border Post-Op dressing group was significantly higher than in the traditional dressings group, (P = 0.001). During dressing change the mean pain score in the traditional dressings group was significantly higher than in the Mepilex Border Post-Op dressing group, (P = 0.001). suggesting that the increase in mean pain score in the traditional dressings group was a result of dressing removal (see Figure 5). Immediately after dressing change the mean pain scores decreased in both groups.

DISCUSSION

The effectiveness of dressing choice has been shown to influence the occurrence of complications such as pain and blistering.3 In this study, the Mepilex Border Post-Op dressing showed a number of advantages over traditional dressings.

Minimal pain during dressing change was observed in the Mepilex Border Post-Op dressing group. Pain scores prior to and during dressing change were significantly lower compared to the traditional dressings group, (P < 0.001).

CONCLUSIONS

This clinical study has demonstrated the efficacy of Mepilex Border Post-Op (Figure 6) in the management of surgical wounds healing by primary intention. In terms of ease of application/removal and dressing wear time, Mepilex Border Post-Op performed favourably when compared with traditional dressings, the dressing was easy to use in all instances and fewer additional dressing changes were needed for those patients treated with Mepilex Border Post-Op. Furthermore, pain during dressing change was minimal. It seems reasonable to suggest that these results translate to clinical efficacy in terms of minimisation of patient discomfort and wound trauma. Indeed, whilst blister formation was low in both groups, in the Mepilex Border Post-Op group all identified blisters were located beyond the limits of the dressing suggesting that dressing-related blistering was effectively prevented in those patients treated with Mepilex Border Post-Op. Previous studies have also shown that Mepilex Border dressings reduce blistering to a minimum.4

REFERENCES

2. Weisbord J, Stankiewicz M, Scullion P, Chabot AM, Sieroff KL. Negative pressure wound therapy for skin grafts and surgical wounds healing by primary intention. Cochrane Database of Systematic Reviews 2015; Ep004600