

Evidence-based practice on wound packing following incision and drainage research...

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Evidence-Based Practice on Wound Packing Following Incision and Drainage

Identification, critical appraisal, and synthesis of evidence from research articles is an essential skill in evidence-based practice (EBP) (Titler, 2008). This paper will critique two primary research articles related to the issue of wound packing following incision and drainage. The first article is authored by Leinwand et al. (2013) and is entitled “ Incision and drainage of subcutaneous abscesses without the use of packing”. The second article is authored by Alimov et al. (2013) and is entitled “ Use of a silver-containing hydrofiber dressing for filling abscess cavity following incision and drainage in the emergency department: A randomized controlled trial”.

The study by Leinwand et al. (2013) sought to determine whether omission of the wound packing component in the management of subcutaneous abscess has similar efficacy to wound packing. The study employed a prospective randomized controlled trial design whereby 100 participants were randomized to either the wound packing group or to the non-packing group. The study enrolled pediatric participants aged less than 18 years with subcutaneous abscesses. The sample size for the study was small (100). Consequently, the study did not have significant statistical power as a sample size of 4000 was required to gain power of 80%. The researchers, however, accepted the small sample size as it was practical for the purposes of the study. The selected sample is appropriate to the population of interest because the participants were experiencing the phenomenon of interest that is abscesses requiring incision and drainage.

Regarding data collection, similar pre-intervention data was collected on the

operative day for all participants. These data included age, gender, and location and size of the abscess. Post-intervention data was collected through follow-up telephone calls by a pediatric surgery nurse specialist. These calls were made on the 7th and 30th post-operative days and included information on general wound appearance, adherence with warm soaks and antibiotic therapy, presence of fever, and timing of pack removal. The reliance on self-reported information may have introduced information bias due to socially desirable responding and problems with recall (Fadnes, Taube, & Tylleskar, 2008).

Of the 100 participants who enrolled for the study, only 85 completed the study. The study found that the packing group and non-packing groups did not vary statistically with respect to abscess recurrence rates, initial parameters, and incidence of methicillin-resistant staphylococcus aureus (MRSA). Only two abscess recurrences were reported, one for each group. In their discussion, the authors contextualize these findings in light of pre-existing evidence. They note that the findings of their study are identical to those of similar previous studies on both adults and children. The authors also compare the strengths and weaknesses and merits and demerits of their study and intervention with those of previous studies. They also discuss the two cases of treatment failure. Lastly, they provide recommendations for future studies.

On the incorporation of evidence into treatment protocols, integration of research findings into treatment protocols/procedures occurs through the process of evidence-based practice. Research articles relevant to a clinical issue of concern are identified, appraised critically, and their findings used to

make specific recommendations for practice on incision and drainage (Dontje, 2007).

The Purpose of the Alimov et al. (2013) study was to investigate whether packing of abscess cavity with a silver-containing hydrofiber dressing instead of the standard iodoform dressing leads to less pain and faster wound healing. The study employed a prospective randomized controlled trial design whereby participants were randomized to the silver-containing hydrofiber or standard care groups. The study population consisted of adults aged more than 18 years who visited the emergency department of a teaching hospital with cutaneous abscesses > 2cm in diameter that required incision and drainage. The selected sample consisted of 92 patients. The sample for the study is appropriate to the selected topic as it focuses on the issue of incision and drainage protocols.

Data for the study was collected and documented on a standard form except for pain. The data collected included pertinent demographic and clinical variables. Pain was assessed using a self-report scale, the Wong-Baker FACES Pain Rating Scale. The use of a self-report scale for pain may have introduced social desirability bias. The findings of the study may have also been contaminated by bias due to the manual measurement of the dimensions of the abscess cavities. The primary outcome measures for the study were the proportion of patients with a reduction of 30% or > in the surface area of the abscess at the first follow up visit (between 48 and 72 hours). The other main outcome variable was proportion of patients with 30% or > decrease in the surrounding cellulites at the first visit. The secondary outcome measure was the change in self-reported pain intensity

at primary and consequent visits.

The study found that 82.6% of the patients in the silver-containing hydrofiber group had a reduction of 30% or > in the surface area of the abscess compared to the 26.1% of the subjects in the iodoform group ($p < .0003$). Patients in the silver-containing hydrofiber group also experienced a statistically significant change in severity of pain scores between the first and follow-up visits. The findings on reduction of surrounding cellulites were not statistically significant. The discussion section of the study discusses the findings of the current study in light of previous research. This section also describes the limitations of the study. For instance the use of self-report scales to assess pain levels as these are subject to bias. The results of the current study can be integrated into existing care protocols through the process of EBP. In this case, the article would need to be appraised together with other relevant articles and their findings synthesized. Recommendations for practice would then be made depending on the level and strength of evidence contained in the articles (Dontje, 2007).

In summary, this paper has critiqued two research articles related to the issue of wound packing following incision and drainage. The articles by Leinwand et al. (2013) and Alimov et al. (2013) have been critiqued in terms of their purpose, design, sample, data collection procedures, results, and discussion.

References

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