

A Comparison of the Clinical and Cost Effectiveness of Two Post Operative Dressings on Blister Formation following Orthopaedic Hip and Knee Surgery

*Meagher, H.,¹ Daly, A.,¹ Loganathan, K.,¹ O' Dwyer, S.,² Saunders, J.³
Mid-Western Regional Hospital, Dooradoyle, Limerick¹
Mid-Western Regional Orthopaedic Hospital, Croom, Co. Limerick²
Statistical Consulting Unit, University of Limerick³*

INTRODUCTION

This comparison study was undertaken to compare the clinical and cost effectiveness of two post operative dressings in orthopaedic hip and knee surgery. The dressings compared were a standard dressing (consisting of telfa, wound pad and hypafix) and a hydrofibre/ hydrocolloid combination dressing (consisting of Aquacel™ hydrofibre and Duoderm™ hydrocolloid [Convatec]). Prior to the study commencing, the standard dressing was routinely used for post-operative wound care. However, in an audit of complications following the above surgeries, adverse skin reaction, including blistering around the wound site emerged as a significant problem, affecting 37.5% of patients post-operatively. A review of the literature confirmed that this problem is not uncommon following orthopaedic surgery.¹⁻⁴ Blistering can lead to pain, delayed healing, delayed discharge and the possibility of infection as a result of injury to the skin's integrity.¹ Previous studies have suggested that blisters may be linked to the type of post-operative dressing used.¹⁻⁵

METHODOLOGY

Two hundred and twenty nine orthopaedic patients undergoing elective hip and knee replacement or repair of fractured hip were randomly allocated to either standard or combination dressing groups. Outcome measures were blistering, dressing wear time and number of days to first dressing change over a seven-day period. Nursing staff completed a data collection sheet to evaluate the study outcome measures.

RESULTS

The incidence of blistering for elective total hip and knee replacement was 21.4% in the standard dressing group and 4.1% ($p=0.001$) in the combination group. Similarly the incidence in hip fracture group was 50% for the standard dressing compared to 0% in the combination group ($p=0.00$). Overall, the rate of blistering in both elective and trauma groups was reduced by 25% in those who had the combination dressing ($p<0.001$) when compared to the standard dressing group. Total dressing changes ratio combination 1: standard 2 ($p<0.001$). Time to first dressing change ratio combination 5 days: standard 2 days ($p<0.001$). The combination dressing had a longer wear time, requiring 50% fewer dressing changes than the standard group over the initial seven post operative days. First post-operative dressing changes was 5 days in the combination compared to 2 days in the standard group suggesting that it is also a cost effective alternative to the standard dressing. Furthermore reduced dressing changes minimises the risk of infection in this patient group.

CONCLUSION

The results of this study prove that the combination dressing is more effective than standard dressing in reducing the incidence of post-operative blistering in patients undergoing orthopaedic hip and knee surgery.

REFERENCES

Available on request.