IMPROVEMENT OF SURVIVAL IN PATIENTS WITH EXTENSIVE BURNS INVOLVING THE PERINEUM WITH USE OF A FECAL MANAGEMENT SYSTEM

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SUMMARY. The purpose of this study is to assess the effectiveness of faecal management systems in improving survival of patients with extensive burns involving the perineum. All adults with burns of more than 30% total body surface area (TBSA) who were actively treated in our regional burn service between December 2008 and July 2012 were reviewed and compared to a historical cohort of 18 adult patients with similar burns involving the perineum, treated in our regional burn service between 1999 and 2001. For the last five years, faecal management systems (FMS) have been used for patients with extensive burns involving the perineum. Sixteen patients with burns greater than 30% TBSA involving the perineal region were admitted during this period and all were managed with FMS. Four of the 16 patients (25%) managed with FMS died compared to 11 of the 18 patients (61%) in the historical cohort. The survival of patients with extensive burns involving the perineal region was improved using FMS. No significant complications were reported in relation to the use of FMS. FMS allows faecal diversion, reduced perineal soiling and improved personal hygiene. We believe this allows easier management of these difficult injuries, may reduce the incidence of sepsis and improves survival.

Keywords: faecal management system, burns, perineum

Introduction

Burns to the perineum and genitalia are an uncommon yet devastating injury.1,2 Burns to these areas generally occur in conjunction with burns involving other anatomic sites, but may be isolated, as in the cases of intentional scalding.3,4 The presence of perineal burns is known to complicate burn management and remains a recommended reason for referral to a burn unit.

This study assesses the effectiveness of the FMS in decreasing mortality.

Method

A retrospective study using data from the MetaVision Clinical Information System gathered from the Burns Intensive Therapy Unit (ITU) of St Andrews Centre for Plastic Surgery and Burns between December 2008 and July 2012. The review included all adult patients with burns of 30% TBSA or more involving the perineum, medial buttocks and/or upper inner thighs who were managed using FMS.

The mortality rate was compared to that of data from an historical audit, prior to use of FMS, of patients with burns of 30% TBSA or more involving the perineum treated in our burn service between 1999 and 2001. All patients with extensive non-survivable burns admitted for comfort care only were excluded from both studies.

Results

Sixteen adult patients with burns of 30% TBSA or more involving the perineum, medial buttocks and/or upper inner thighs were treated in the ITU of our regional burn centre between December 2008 and July 2012. There were 4 females and 12 males, with a mean age of 38.2 years. The mean burn size was 53.25% TBSA. 50% of patients had inhalation injury, and the mean ABSI (Abbreviated Burn Severity Index) was 9. The mean number of days in ITU was 42. Flexi-Seal® (Convatec, Harrington House, Milton Road, Uxbridge, UK) Faecal Management System (FMS) was used in all patients for variable peri-
ods with a mean of 33.5 days, Fig. 1. There were no significant complications from using the FMS. Only four patients (25%) deceased due to sepsis. The use of FMS improved patient hygiene and decreased the workload of the nursing staff.

In the historical cohort study, there were 18 adult patients with burns of 30% TBSA or more involving the perineal region. These patients were treated in the ITU of our regional burn centre between 1999 and 2001. Eleven patients (61%) deceased due to sepsis.

Discussion

Burns to the perineum, medial buttocks and upper inner thighs are frequently contaminated with faeces, resulting in wound infection, delayed healing, skin graft loss and sepsis. Employment of a faecal management system (FMS) allows diversion of faeces away from the perineum to facilitate wound healing. The purpose of this study is to assess the effectiveness of the FMS in decreasing sepsis and mortality.

Since use of multiple types of FMS began in patients with wounds to the perineum, there have been reports of improved healing, reduced need for changes of dressings and bed linen, as well as reduced need for diverting stoma operations. Although the total number of days in which FMS was used in some patients exceeded 30 days, there were breaks in between these days, with the longest consecutive use of FMS being 29 days. No local long-term complications were reported.

In comparing the mortalities (61%) of those patients with extensive burns involving the perineal region before the introduction of the FMS into our burns service with the mortalities (25%) of those patients with similar injuries who had the FMS, a significant improvement is shown. FMS facilitated personal hygiene and decreased contamination with faecal materials of burnt areas, skin grafted areas and skin graft donor sites, subsequently decreasing the incidence of wounds sepsis. In addition to FMS, other factors might contribute to improved survival, such as new antibiotics and dressings.

Conclusion

FMS allows faecal diversion, reduced perineal soiling and improved personal hygiene. We believe this allows easier management of these difficult injuries and may reduce the incidence of sepsis, as well as improving survival outcome.

RÉSUMÉ. Le but de cette étude est d’évaluer l’efficacité des systèmes de gestion de matières fécales dans l’amélioration de la survie des patients atteints de brûlures étendues impliquant le périmètre. Tous les adultes souffrant de brûlures de plus de 30% de la superficie totale du corps (SCT) qui ont été traités activement dans notre centre régionale entre Décembre 2008 et Juillet 2012 étaient examinés et comparés à une cohorte historique de 18 patients adultes atteints d’une blessure similaire impliquant le périmètre.
née, traités dans notre centre entre 1999 et 2001. Pour les cinq dernières années, les systèmes de gestion de matières fécales (FMS) ont été utilisés pour les patients souffrant de brûlures étendues impliquant le périnée. Seize patients souffrant de brûlures supérieures à 30 % de la SCT impliquant la région périnéale ont été admis au cours de cette période et tous ont été gérés avec FMS. Quatre des 16 patients (25%) gérés avec FMS sont morts comparativement à 11 des 18 patients (61%) de la cohorte historique. La survie des patients atteints de brûlures étendues impliquant la région périnéale a été améliorée en utilisant FMS. Aucune complication significative n’a été signalée en ce qui concerne l’utilisation du FMS. FMS permet diversion fécale, réduit les salissures du périnée et améliore l’hygiène personnelle. Nous pensons que cela permet de faciliter la gestion de ces blessures difficiles, peut réduire l’incidence du sepsis et améliorer la survie.

Mots-clés: système de gestion des matières fécales, brûlures, périnée

BIBLIOGRAPHY


Conflict of interest. None

Funding. None

Note. This study was accepted at 16th Congress of the International Society for Burn Injuries - ISBI 2012

This paper was accepted on 16 October 2013.