

An Abdominal Cavity Wound Case Study: the importance of dressing selection

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Introduction

This case study demonstrates the importance of effective and safe dressing selection for a high-risk patient with a large abdominal cavity wound. Incorrect dressing selection for these wounds can result in delayed healing and cytotoxicity and pose a substantial risk of causing damage to other organs.

Method

Tissue viability received a referral to support a patient with a large abdominal wound. The patient was a 39-year-old healthy female, with no past medical history, who was hospitalised following collapse and multiple cardiac arrests as a side effect of a pulmonary embolism. She was cared for in the intensive care unit (ICU) for 3 weeks following an induced coma, anticoagulation, multiple laparotomies, and surgical interventions.

Due to growing concerns, including the presence of an abdominal mesh to support the patient's internal organs and the formation of a stoma, the tissue viability nurse had to ensure that an appropriate and safe dressing regime was selected to treat the wound. Preventing sepsis and avoidance of dressing adherence to the internal organs was fundamental. Cytotoxicity and delayed healing can be caused by incorrect dressing selection but for this patient there was also an elevated risk of causing damage to other organs within the abdominal cavity.

A Technology-Lipido-Colloid (TLC) dressing was chosen by the clinician as the first-line treatment due to the knowledge that it would not adhere and it would enhance fibroblast proliferation¹. **UrgoTul Silver** could guarantee non-adherence and atraumatic removal. The silver contact layer was selected to minimise tissue inflammation and prevent any increase in microbial activity, which could lead to localised tissue infection and reducing the risk of sepsis.

During the initial tissue viability assessment, intra-abdominal bleeding was still present and the wound measured 22cm x 15cm x 4.5cm (*Image 1*).

The antimicrobial contact layer was commenced for a 2-week period, with a superabsorbent pad as a secondary dressing.

Results

No dressing adherence occurred however bowel was exposed on day 7 due to the mesh tearing (*Image 2*) which heightened the importance of a truly non-adherent dressing. At week 2, due to the decreased risk of infection and diminishing symptoms, the **UrgoTul Silver** was changed to **UrgoTul**, a neutral TLC contact layer without silver. At this time, the wound measured 21cm x 16cm x 2.5cm representing a wound area reduction (WAR) of 44% from initial assessment and intervention by the specialist tissue viability nurse. Daily dressing changes were performed by the ward staff with **UrgoTul**, and a twice weekly review by the tissue viability nurse.



Image 1
Wound measuring 22cm x 15cm x 4.5cm on referral to Tissue Viability



Image 2
Day 7: Torn Mesh



Image 3
Day 43 - Wound measuring 18cm x 13cm representing an 84% WAR



Image 4
Final image on clinic discharge at 28 weeks of treatment

Discussion

As the patient's health improved and she was transferred from ICU to a general ward, she was adamant she would be discharged from hospital in time to celebrate her 40th birthday at home. She was a fully concordant patient and proactive with the advice she was given by tissue viability and dietitians, guaranteeing her lifestyle would maximise wound healing. There had been a concern for her psychological well-being due to the size of her wound, as previously this patient was meticulous about her appearance, but with such a positive attitude this concern was negated.

Following 6 weeks of using **UrgoTul** and **UrgoTul Silver**, the wound had 50% granulation and 50% epithelisation tissue present equating to an 84% WAR (*Image 3*).

She was discharged just prior to her 40th birthday and attended her local ambulatory clinic with the wound healing at 28 weeks post initial treatment (*Image 4*).

Conclusion

It is essential for clinicians to consider all risks when treating patients with complex wounds, including the risk of sepsis. Care planning should support a regime that mitigates identified risks. Implementing a dressing regime that is based on robust clinical evidence ensures that the wound and patient progression can be monitored and expectations met. Using both the silver and neutral TLC dressings ensured that any risks were minimised and healing was facilitated. TLC dressings support safe and effective wound care for the most complex patients¹. The simplicity of the dressing regime allowed consistency in care and a positive impact on the patient's quality of life.

Day	Measurements	Percentage Wound Area Reduction from Day 1
1	22cm x 15cm x 4.5cm	-
10	22cm x 20cm x 3cm	12%
14	21cm x 16cm x 2.5cm	44%
43	18cm x 13cm	84%
165	4.1cm x 3.3cm	91%

References:

¹ White, R., Cowan, T., Glover, D. Supporting evidence-based practice: a clinical review of TLC healing matrix (2nd edition). MA Healthcare Ltd, London, 2015