Managing Wound Care and a Fistula with High Output Drainage with Negative Pressure Wound Therapy (NPWT) using Antimicrobial Gauze

Introduction

Wound healing and treatments are progressive and the medical environment is evolving. There are multiple new technologies and research providing innovative insight and opportunity for advancing best practices to be implemented into multiple clinical areas. Best practice includes a multi-disciplinary approach. 1, 2

This team includes: Physicians (makes diagnosis), Dietitians (nutritional support), Physiotherapist/Occupational Therapist, (guiding treatment to maintain tissues and organs). This proved difficult. Therefore, the outcome goals stood to include: slowing down of fistula output, and provide healable wound environment; provide adjuvant medical support (nutritional pharmacological), provide emotional/physical support and maintain quality of life, eventually close the fistula. 3

Method

This poster presents a case study of a 55 year old patient who awoke at 12:30 pm post surgery. She was intubated in the OR and then transferred to the ICU where she was placed on ventilators for 24 hours. She had an ICU stay of 23 days. She was transferred to the ward on day 24 and discharged on day 39 of hospital stay. Her IV access was an ARD (Arterial Radial Access Device) and a PICC (Peripheral Intravenous Catheter).

The initial goal was to contain effluent in the wound and reduce bacterial burden on surrounding tissues and organs. This proved difficult. Therefore, the outcome goals stood to include: slowing down of fistula output, and provide healable wound environment; provide adjuvant medical support (nutritional pharmacological), provide emotional/physical support and maintain quality of life, eventually close the fistula. 3

Outcome Goal

The wound healed well and 4 of 4 fistulas closed on their own.

Discussion

The wound bed and bowel, a specific non-adherent interface was chosen to be used and wound filler was placed on either side of the wound to fill any uneven surfaces. The first graft placed over the interface kept dry which provided a new approach to providing protection of the periwound. When the NPWT dressing was initiated, low continuous suction (100 mmHg) at all sites was applied. This proved effective and efficient for both the patient and hospital staff. The patient was kept hydrated and well nourished without any episodes of hypotension or hypoglycemia. The patient was discharged on day 39 of hospital stay.

Conclusion

Gastrointestinal fistulas have proven to be challenging. This case study, with the use of NPWT with gauze over conservative dressings, three of four fistulae closed and remaining fistulae effluent reduced, allowing for decrease in wound size and depth. Surgery for the remaining fistulae was completed in four months. This patient participated in decision making and monitoring of his wound with NPWT. The patient maintained quality of life, by being able to know day on day assistance decreased and NPWT decreased stress, prior to resumption to close fistulae. This supported the patient’s emotional and mental health. Innovative technology is moving to the forefront, as wound care evolves at rapid speeds. The multidisciplinary approach with patient-centered care proved efficient and safe. Balance of both with a creative approach of using two NPWT machines simultaneously proved to be effective. Further trials and discussions need to be centered on the use of NPWT and wound fillers, as well as using creative approaches with available wound care technology and resources.

References


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