Poster Presentation

Topic : The combined use of Modified Negative Pressure Wound Therapy and pouching system for Enteroatmospheric fistula management

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Introduction

Enteroatmospheric fistula (EAF) defined as a type of enterocutaneous fistula which surrounded by granulation tissue or exposed viscera[1]. This phenomenon is the most challenging postoperative complication. The objective of EAF management is control effluent and divert it away from wound[2]. Achieving this goal is difficult especially in case of the fistula tract placed under wound edge or opening of lumen below skin level. Several different techniques have been developed to manage this problem [1].

This case study reports the successful management of EAF by using Negative Pressure Wound Therapy(NPWT) plus pouching with suction system to isolate the fistula from the surrounding tissue.

Case report

Case blunt abdominal injuries post operation and Split-thickness skin graft (STSG). A gastrocutaneous fistula was develop nearly to STSG. This admission, he had been scheduled for close fistula with posterior component separation technique. The surgical wound was separated and enteroatmospheric fistula was developed. Opening of lumen cover by cutaneous and fat tissue (figure1A).

The drain was placed through the fistula tract. Surgical debridement was performed to prepare skin for pouching. A Foley catheter was placed inside the EAF and the balloon was inflated to occlude the fistula (figue1 B C). Enterostomal therapist nurse was consulted for fistula and wound management.

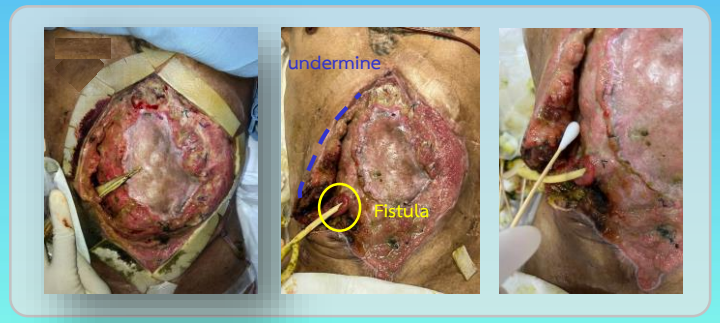

Figure 1 :
A: wound dehiscence was develope
B: Post debridement (anterior view)
C: Post debridement (lateral view)

Objective

Goals for wound and fistular management are including effluent containment, odor control, contaminated prevention, and wound healing promotion.

Intervention

Remove foley catheter because effluent still leakage around fistula site and difficult to pouching then manage as following.(figure2)

1. Cleansing with 0.9% NaCl and Polyhexamethylene biguanide (PHMB)
2. Protect periwound skin with skin barrier film
3. Bridging dehiscence wound and fistula area with skin barrier powder, skin barrier film, skin barrier paste and hydrocolloid wafer.
4. Apply silicone foam dressing at dehiscence wound and STSG site
5. Promote wound healing EAF with Modify Negative Pressure Wound Therapy : Covered by impregnated gauze polyurethane sponge and transparent film dressing and connect to vacuum system pressure -80 mmHg.
6. Pouching with one piece transparent flexible faceplate pouch.
7. Placing multi lumen tube in stoma bag, sealed and connected to continuous suction pressure -80mmHg for more effective drainage and prevent pouch leakage

Figure 2 :
Modified Negative Pressure Wound Therapy and pouching system

Results

30 days after intervention wound size and depth were decreased wound depth from 5 cms to skin level (figure 3)

Figure 3 Post intervention

Conclusions

The combination of NPWT and pouching with suction system used for ECF management was effective to facilitated wound healing, eventually, the fistula was simplified to care. Caregiver can be pouching fistula and the patient was transferred to a general hospital.

References

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2.Valiente L, García-Alcalá D, Paz P, Rowan S. The challenges of managing a complex stoma with NPWT. Journal of wound care. 2012;21:120-3.