Case study: The use of topical negative pressure therapy in the management of peristomal pyoderma gangrenosum

Improving function in the patient with an ileo-anal pouch

Case study: The long road to recovery of a patient with an open abdomen and multiple fistulae

Life Membership awarded to Susan Dunne
AASSTN Code of Ethics

• The stomal therapy nurse must at all times maintain the highest standards of nursing care and professional conduct.

• The stomal therapy nurse will provide needed services to persons irrespective of their race, colour, creed, sex, sexual preference, age and political or social status.

• The stomal therapy nurse must respect the beliefs, values and customs of the individual and maintain his/her right to privacy by maintaining confidentiality, sharing with others only information relevant to that person’s care.

• The stomal therapy nurse will not participate in unethical practice.

• The stomal therapy nurse must maintain competency by keeping abreast of new developments in the theory and practice of stoma care and related fields.

• The stomal therapy nurse will participate actively in professional, inter-professional and community endeavours in order to meet the highest professional standards.

• No full member shall be in the employment of a company or self-employed in the manufacture or sale of products, prostheses or pharmaceuticals where it could be perceived that the use or selling of products, prostheses or pharmaceuticals could disadvantage or contradict the personal preference of clients or be construed to result in unethical conflict of interest.

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The use of topical negative pressure therapy in the management of peristomal pyoderma gangrenosum

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INTRODUCTION

Pyoderma gangrenosum (PG) is a very painful skin disorder with lesions that can occur on any part of the body. The pathogenesis of this condition remains obscure and the cause has been associated with immunosuppression and viral or bacterial infection1.

The literature reports a large variety of topical and systemic treatments have been used to treat this condition2. PG is a relatively uncommon disorder and PG should be suspected in the presence of any rapidly occurring, painful pustule that develops into an undermined ulcer with violaceous edges. When located in the peristomal area, the moist lesions can undermine the security of the ostomy appliance. There is no definitive diagnostic test for PG, although a biopsy may be obtained to rule out other conditions such as vasculitis. A diagnosis is dependent upon the clinical presentation, particularly when there is a rapid onset of the lesion, the appearance and the pain associated with the wound and the patient’s history of inflammatory bowel disease3. Other people at risk may have rheumatoid arthritis, malignant cancers or diverticular disease4.

This case study will demonstrate the use of negative pressure wound therapy in the treatment of peristomal PG. The purpose of this case study is to share this experience with other stomal therapy nurses, to enhance their knowledge of the technique used and show how this intervention can achieve a positive outcome for patients.

Vacuum-assisted closure (VAC™ therapy) is the application of topical negative pressure, as measured in mmHg. A foam dressing is used to fill the wound defect and this is covered with a semi-permeable film dressing. A suction tube is attached to the dressing and the exudate is drained into a canister when negative pressure therapy is applied5.

THE PATIENT

Beryl is a 72-year-old lady who had undergone a total proctocolectomy with end ileostomy for Crohn’s disease a few years previously. She is visually impaired and, together with her supportive husband of 50 years, successfully manages her ileostomy using a Hollister convex, one-piece drainable pouch.

Teaching stoma care to Beryl and her husband was a challenging, but rewarding experience. I had not seen Beryl for some time and because we had built up such a rapport and trust over that period, she presented as an out-patient with a very painful peristomal ulcer under her base plate (Figure 1).

TREATMENT

Beryl was admitted to hospital for pain management and wound care. PG was the initial diagnosis based on the patient’s age, history of Crohn’s disease, the development and the appearance of the lesion, the degree of pain experienced and the location. Research has also shown that the possibility of minor trauma related to the increased pressure exerted on the peristomal skin from using a convex appliance may have exacerbated this condition3,6.

Beryl stated that the area started as one small pustule, which had increased in size and was now very painful. The lesion had ragged edges and a bluish ‘halo’ in the peristomal tissue typical of PG.

A multidisciplinary approach was required and included a colorectal surgeon, infectious diseases consultant, gastroenterologist, dietician and stomal therapy nurses. Treatment included surgical debridement and biopsy of the lesion, antibiotics, infliximab and VAC™ therapy.

Figure 1. Day 1.
The initial topical treatment was to apply Kenacomb ointment to the ulcers, cover the ointment with an alginate dressing and apply a thin hydrocolloid before putting on the appliance (Figures 2, 3 and 4). This treatment had worked well when used previously. Kenacomb ointment is useful for inflammatory dermatoses with bacterial and/or fungal infections.

Despite systemic hydrocortisone, further surgical debridement of the ulcer was required. There was extensive necrosis around the lateral edge, extending into the right flank. A very wide and deep excision to the fascia was performed and the specimen sent for histology as well as microbiology for suspected necrotising fasciitis.

At this stage, the infectious diseases consultant reviewed the patient and a 48-hour course of high-dose penicillin and lincomycin were given. This was ceased after 48 hours as the patient did not present clinically as necrotising fasciitis and the ulcer was probably still consistent with severe PG.

The following day, the gastroenterologist commenced IV Infliximab 240mg over a four-hour period. Infliximab is a type of antibody, which is effective in the treatment of PG by suppressing the inflammatory process that PG manifests.

The team met to discuss management, which included a wound swab for culture and sensitivity, bloods were taken and the patient commenced on intravenous (IV) hydrocortisone treatment. The lesion continued to increase in size.

Surgical debridement and biopsies were taken. The ulcer and peri-ulcer skin were injected with 1mg Celestone after high dose oral steroids seemed ineffective in halting the progression of ulceration. Histology confirmed PG (Figure 5).