Caring for a person with a colocutaneous fistula at the end of life can present challenges. Symptom control and psychosocial support are vital to ensure comfort.

Palliative care of a colocutaneous fistula

In this article...

- Dealing with fistula output and reducing leakage
- Promoting comfort at the end of life
- Providing psychological support

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Colocutaneous fistulas present a number of challenges, including management of fistula output, skin integrity and psychological care of patients. This article describes the management of a fistula with a daily output of more than 3,000ml of faecal fluid. A variety of management options were used to improve the care of a patient at the end of life.

A colocutaneous fistula (CCF) is an abnormal opening or tract between two surfaces of the human body, the colon (“colo”) and the skin (“cutaneous”) (Berry and Fischer, 1996).

This case study describes a patient with a fistula inside a dehisced laparotomy wound on the lower abdomen. Dehiscence occurs when a surgical wound breaks open along a suture line. Risk factors for breakdown include advanced age, diabetes, poor nutrition and obesity.

Patient history
Thomas French*, aged 70, was diagnosed with cancer of the colon in 2007 and had a sigmoid colectomy with end colostomy. He was admitted to hospital in 2011 with severe abdominal pain. Investigations identified bowel cancer and widespread metastasis in the liver, lungs and most of the peritoneal cavity.

Mr French was taken to theatre to save what was left of his bowel. He had already had a colostomy formed during his previous surgery, and this could not be reversed due to the spread of the cancer, so he then had an ileostomy. The bulk of the bowel cancer was removed as a palliative measure to allow Mr French to eat without vomiting and to relieve some of his other symptoms such as abdominal pain.

Mr French did not make a good postoperative recovery. He was kept nil by mouth for a number of days and experienced postoperative nausea and vomiting. As his condition deteriorated, his abdominal wound began to dehisce. When the wound staples were removed a colocutaneous fistula was discovered, producing on average more than 3,000ml of liquid faecal matter in 24 hours. In light of Mr French’s diagnosis he now needed palliative care and he and his wife agreed with the management plan.

Pharmacological solutions
The aim of care was to keep Mr French hydrated and reduce the fistula output to a more manageable volume so it would not constantly leak liquid stool.

5 key points

1. A colocutaneous fistula is an abnormal opening or tract between the colon and the skin.
2. The aim of fistula management at the end of life is to promote comfort and provide psychological support.
3. A large volume of fistula output can lead to dehydration and electrolyte imbalance, and fluid and electrolyte replacement is required.
4. A combination of wound management and stoma products can help to manage fistula output and reduce leakage.
5. Topical negative pressure therapy is a useful option to manage fistula output as part of palliative care.

Keywords: Fistula/Colocutaneous/Stoma/TNP

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Case study

In an attempt to control the output a combination of medicines were used. These included high-dose subcutaneous octreotide. This was administered using a syringe driver to slow down the bowel transit time and thicken the consistency of the output. Octreotide stimulates water and electrolyte absorption and inhibits water secretion in the small bowel (Royal Pharmaceutical Society of Great Britain and British Medical Association, 2011).

Codeine phosphate and loperamide tablets were also used in an attempt to reduce the output. The output from the fistula became a liquid-porridge consistency at best, despite giving Mr French the maximum dose of these drugs.

With such a large output from the fistula dehydration became a problem and although Mr French was eating small meals, he also required four litres of intravenous fluid every 24 hours. St Mark’s solution was also prescribed to keep his electrolyte balance within the normal limits. This glucose-electrolyte solution is used in the management of short bowel syndrome, which reduces the small bowel’s capacity to absorb fluid and nutrients (tinyurl.com/St-Marks-solution).

Wound/fistula care

Various wound manager bags isolated the faecal output from the fistula, but they leaked after only a few hours and this resulted in skin excoriation.

A piece of suction tubing was connected to the nozzle at the end of the wound manager bag with the aim of attaching it to low-grade suction to discourage the effluent from “pooling” at the bottom of the bag (McKee and Watson, 2003). This worked initially but whenever Mr French sat out of bed the bag would leak from any skin folds created by him sitting upright.

This continuous leakage had implications for Mr French’s psychological well-being as he felt he could not move without the bag leaking. His skin became red, excoriated and broken around the side of the wound manager bag where the faeces leaked and came into contact with the skin.

Gauze and an adhesive, transparent dressing were used to pack and cover the bottom of the wound. The fistula was then surrounded with stoma paste to separate it from the gauze so that a stoma pouch could be used on top. However, the effluent leaked between the paste and the pouch and saturated the gauze below.

Topical negative pressure therapy

The final method used was topical negative pressure therapy (TNP), a moistened gauze-based system that extracts any exudate from the wound into a pump with a canister attached (Cro et al, 2002) (Fig 1).

TNP is usually contraindicated with this type of wound as it can cause further fistula formation, but because Mr French’s treatment was palliative and all other avenues had been exhausted, this was one of the only options available to manage the output from the fistula.

The TNP (Venturi) dressing was applied to the lower wound and the fistula was isolated at the top by using layers of Orabase paste, a Dermacol stoma collar (Fig 2), which prevented output from coming into contact with the skin and a Hollister washer. It was then possible to surround the wound with clear adhesive film and leave the fistula open enough to put a post-operative stoma pouch on top. This enabled staff to create an adequate seal around the fistula, which protected the rest of the wound from the effluent. A topical barrier spray (Cavilon) was used to protect the skin by creating a film over the affected area (Dearlove, 1996). This method allowed any liquid effluent to be extracted through the TNP pump if it came near the wound, and any thicker stool drained into the stoma pouch.

Fig 2. The Dermacol stoma collar prevents output from contacting the skin

Outcome

It was easier to maintain Mr French’s fluid balance because output from the fistula could be accurately measured. His skin also improved over several days as the effluent was not causing excoriation.

Mr French wanted to go home and spend his last days with his wife. Unfortunately this was not possible due to staffing restrictions and lack of equipment, such as a home suction machine, which was held over the fistula by a second staff member when the dressings were being changed.

Once the ward staff had an established regimen for dressing changes, the TNP would stay on for 24–48 hours. Mrs French was allowed to visit him whenever she wanted so they could spend as much time together as they wished. Eventually Mr French deteriorated and he had to go to a hospice for his care needs to be met.

The ward arranged for hospice staff to come in and see a demonstration of how to change the TNP dressing and fistula pouch. A book of instructions was compiled on how to apply the dressings and an equipment checklist supplied with order codes.

Conclusion

In this case, TNP allowed Mr French to live more comfortably, without the constant fear of the fistula leaking. Any faeces that did leak into the wound were vacuumed into the TNP pump. Skin integrity around the wound was maintained as the inflammation began to reduce. Mr French knew from the outset that the aim of the TNP therapy was not to heal the wound, but to gain control over the output so he could have some quality of life and do simple activities such as sit in a chair to eat a meal. Mr French died two weeks after being admitted to the hospice with his wife by his side. NT

*The patient’s name has been changed

References


