CASE REPORT

Healing of a pyoderma gangrenosum at the site of a percutaneous endoscopically sited gastrostomy tube without tube removal

Charles Davis, Bethany Wright

St Mary's Hospice,
Birmingham, UK

Correspondence to

Dr Charles Davis,
charliedavis@doctors.org.uk

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SUMMARY

Pyoderma gangrenosum (PG) is a rare but important cause of pain and morbidity, and is associated with malignancy and shows pathergy. Occurrence at a percutaneous endoscopic gastrostomy (PEG) site is rare and may prompt PEG tube removal. This case describes management of PG at a PEG site in a man with squamous cell carcinoma of the oropharynx. Successful healing of the lesion was achieved despite the PEG tube remaining in situ. Care was delivered within the hospice setting with support from the local dermatology service. Infection of the wound was treated with a recently licensed antimicrobial with a novel action. This allowed nutrition to continue, promoting healing further and ensuring a route of delivery for medications, avoiding intravenous therapy.

BACKGROUND

Pyoderma gangrenosum (PG) is an inflammatory process within the dermis leading to painful ulceration of the epidermis.¹ It is associated with underlying diseases such as haematological malignancy, with 30% of cases occurring in patients with inflammatory bowel disease.¹ Pathergy is a feature of PG and describes the cutaneous phenomenon of new ulcerations occurring after trauma or injury to the skin. As a consequence of this, approximately 15% of PG cases are seen at bowel peristomal sites.² This rare but potentially treatable complication is not to be missed, as pain and morbidity are high. A non-healing ulcer associated with, for example, ileostomy or gastrostomy should have a diagnosis of PG considered.

CASE PRESENTATION

In this case we describe the management of PG occurring at a percutaneous endoscopic gastrostomy (PEG) site in a 60-year-old man with recurrent squamous cell carcinoma of the oropharynx.

The patient had undergone a laryngectomy 9 months previously leaving him with a tracheal stoma. He was well known to the inpatient and community specialist palliative care teams who were supporting with pain control relating to recurrent disease. He was unable to safely swallow. As his nutrition was at risk a PEG feeding tube was inserted. Approximately 14 days later, he developed an erythematous and painful lesion around the PEG wound site (figure 1), which further evolved over days to a large, painful, well-defined deep

ulcer with surrounding erythema and an undermined edge.

INVESTIGATIONS

Initially, the patient was referred by his general practitioner (GP) for a dermatology opinion. The histology from a subsequent punch biopsy showed ulceration and inflammation but no microscopic features of PG (figure 2). There are no pathognomonic features in the diagnosis of PG. Making a diagnosis rests on the recognition of consistent clinical and histological findings and the exclusion of other inflammatory or ulcerative cutaneous disorders. In this case, there was no evidence of squamous cell carcinoma, an important differential diagnosis. Swabs of the wound revealed *Streptococcus milleri* sensitive to penicillin. Cross-sectional images via CT excluded abscess or local extravasation of PEG contents into surrounding tissues. This clarified the safety of ongoing PEG use. With the results of these investigations, a presumptive diagnosis of PG was made.

DIFFERENTIAL DIAGNOSIS

Making a diagnosis rests on the recognition of consistent clinical and histological findings and the exclusion of other inflammatory or ulcerative cutaneous disorders. In this case, there was no evidence of squamous cell carcinoma, an important differential diagnosis.

TREATMENT

Three weeks after developing the lesion pain, deterioration of the skin at the site and a need for

Figure 1 Early appearance of pyoderma gangrenosum lesion.

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Figure 2 Lesion and site of biopsy with suture.

regular dressings prompted admission to the hospice for care and symptom control. Regular specialist dermatology management continued in parallel on an outpatient basis. Treatment of PG usually involves systemic therapy with high-dose steroids. In this case, a reducing course of prednisolone was started via PEG under the expert direction of the dermatology team from 30 mg to cessation over a 4-week period.

Owing to penicillin allergy, linezolid³ was used to treat the proven infective element. This was started after the introduction of steroids and clinically appeared to accelerate healing. Linezolid 600 mg tablets were crushed and given via PEG twice daily for a 3-week course in addition to topical metronidazole 0.75% gel applied four times daily to the wound. The linezolid was started under microbiology guidance, which took into account growth of bacteria, resistance profile and patient drug sensitivities. The metronidazole was used topically to aid management of aerobic odour from the wound.

A transmucosal fentanyl preparation was used intranasally in an attempt to relieve breakthrough pain during dressing changes. This was chosen in preference to other opioid preparations due to its reported speed of onset and convenient route of delivery. Despite maximal titration, it failed to relieve wound-site pain, though by serendipity proved effective in relieving concurrent neuropathic neck pain. Morphine was given via PEG, as an alternative during dressing changes, with partial effect.

Non-adherent Urgotel dressings were changed up to every 2 h dependent on strike through, for exudate management around the PEG site. With patient consent, a digital image of the lesion was recorded daily, enabling continuity in monitoring of the wound.

The surgical and nutritional teams involved with PEG placement offered debridement, which the patient declined, preferring to await the outcome of medical management.

Excellent PEG hygiene was a key issue and staff and patient were mindful of potential complications relating to cutaneous or subcutaneous wound leakage. While the wound was deteriorating, enteral nutrition was increased to enhance healing and prepare the patient for the possibility of PEG tube removal. Given the patient's poor oral intake, the PEG represented a route of delivery that was possible in the hospice.

The patient was assessed regularly for signs of systemic compromise and advance care planning gave guidance in the event that escalation of treatment and transfer to hospital became necessary. This was not required but established a safety threshold for hospice-based care.

OUTCOME AND FOLLOW-UP

Once the lesion showed signs of healing, pain control was established and dressing changes were limited to once daily, we

coordinated discharge home with ongoing care from the GP and district nursing team.

The ulcer healed with only moderate scarring at the PEG wound site. As infection and inflammation resolved, so did pain. Sadly the patient continued to deteriorate from his cancer and died peacefully following subsequent readmission.

DISCUSSION

A previous case of PG at a PEG tube site led to removal of the PEG tube and healing of the wound with steroids and antibiotics.⁴ Previous case reports in palliative patients have reported PG at a syringe driver site.⁵

Patient's perspective

Not obtained; the patient's widow consents to publication and is very pleased her husband will have an educational legacy.

Learning points

- Management of pyoderma gangrenosum (PG) can be successfully undertaken in a supported environment such as a hospice, as the regular monitoring of dressings, systemic health and pain is routine work for multidisciplinary hospice teams when providing holistic care for patients.
- Linezolid can be successfully crushed and given via percutaneous endoscopic gastrostomy (PEG). It is equally effective when absorbed by the gut or given intravenously. Treatment of infected cutaneous lesions should take a multidisciplinary approach with consideration of normal commensal organisms and appropriateness of antimicrobial therapy.
- PG at a PEG site can heal without removal of the tube or debridement. As this is a rare condition, definitive guidance for removal of PEG tube could be given with any certainty. Each case should be considered with regard to the risks and benefits of tube removal.

Contributors CD planned, wrote and submitted the case report under the guidance of BW. The patient described was under the care of BW.

Competing interests None.

Patient consent Obtained.

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