Persistent chyle leak following radical neck dissection: a solution that can be the solution

JOHN C MUTHUSAMI, JOHN P RAJ, D GLADWIN, PRANAY GAIKWAD, SHALOM SYLVESTER

Christian Medical College Hospital, Vellore, Tamilnadu, India

ABSTRACT

A case report of a chyle leak following radical neck dissection for residual lymph nodal disease performed after chemoradiation for nasopharyngeal carcinoma. This is the first case report of the use of cyanoacrylate for a persistent chyle leak following radical neck dissection.

KEYWORDS

Chyle leak – Case report – Management

CORRESPONDENCE TO

John C Muthusami, Professor & Head, Department of General Surgery, Christian Medical College, Vellore – 632 004, India
E: sur1@cmcvellore.ac.in

A 45-year-old woman, initially discharged after an uneventful postoperative period following radical neck dissection for residual lymph nodal disease performed after chemoradiation for nasopharyngeal carcinoma, was re-admitted after 2 weeks with a chyle leak.

She was first managed with pressure dressings and a low-fat diet. The leak remained unrelenting, hence the neck was explored. Exploration revealed tissue necrosis and an abscess cavity. Debridement and drainage was done after identifying and ligating the leaking lymphatics.

Postoperatively, a sump drain with a transparent Op-Site® dressing was applied over the wound to document the losses and stimulate granulation tissue formation. During this period, the daily drain was about 200–300 ml of chyle. By the end of the second postoperative week, the leak site was identified to a single point with surrounding granulation. In an effort to try a lymphostat prior to muscle-flap surgery, 0.5 ml of N-butyl-cyanoacrylate was injected into the leak site. The leak stopped instantaneously and the wound healed subsequently.

Chyle leak following radical neck dissection is a known complication. The leak can be managed conservatively using pressure dressings and a low-fat diet. A persistent

leak necessitates neck exploration and ligation of the lymphatic(s), occasionally requiring a muscle-flap cover. The agents that have been used include somatostatin analogue,¹ tetracycline² and fibrin glue.³ Cyanoacrylate has been used as a tissue sealant in varied situations like bleeding gastric varices⁴ and chyluria after nephrectomy.⁵ This is the first case report of its use for a persistent chyle leak following radical neck dissection.

References

1. Valentine CN, Barresi R, Prinz RA. Somatostatin analog treatment of a cervical thoracic duct fistula. *Head Neck* 2002; **24**: 810–3.
2. Metson R, Alessi D, Calcaterra TC. Tetracycline sclerotherapy for chylous fistula following neck dissection. *Arch Otolaryngol Head Neck Surg* 1986; **112**: 651–3.
3. Gregor RT. Management of chyle fistulization in association with neck dissection. *Otolaryngol Head Neck Surg* 2000; **122**: 434–9.
4. Greenwald BD, Caldwell SH, Hespenheide EE, Patrie JT, Williams J, Blinmoeller KF *et al.* N-2-Butyl-cyanoacrylate for bleeding gastric varices: a united states pilot study and cost analysis. *Am J Gastroenterol* 2003; **98**: 1982–8.
5. Tuck J, Pearce I, Pantelides M. Chyluria after radical nephrectomy treated with N-butyl-2-cyanoacrylate. *J Urol* 2000; **164**: 778–9.