

Technical note

Use of a Foley catheter in the drainage of deep space neck infections

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Deep space infections in the oral and maxillofacial region occur when an infectious process spreads through the potential spaces bounded by the deep cervical fascia in the head and neck. These infections are usually odontogenic in origin, but can be the result of trauma, immunosuppression, or disease.¹ Incision and drainage are still the treatments of choice, with management of the source if possible, and drains are often left in place afterwards.

Several types of drain have been described for this purpose, most commonly the Penrose drain for gravity-dependent drainage, and the red-rubber catheter for irrigation postoperatively.² Both of these drains contain latex, however, so cannot be used in patients with an allergy. The Foley catheter provides a good alternative option.

Incision and drainage can be completed in the usual manner when a Foley catheter is used as a drain. In our department, we mark an incision 2 cm below the inferior border of the mandible, use Bovie electrocautery to incise through the skin and subcutaneous tissues, and then make a blunt dissection as far as the border of the mandible in the submandibular space. We continue the blunt dissection throughout the deep spaces until the pus is found, and all the involved spaces have been fully explored. To place the drain, we cut off the balloon at the end of the Foley catheter and make slits in the end

of the tube, which is then directed into the intended space with a large curved haemostat, and secured to the skin with a 2/0 silk suture. The Luer lock (that would be used to fill the balloon) allows easy irrigation of the intended spaces and subsequent drainage of the irrigate through the lumen of the catheter. **Figs. 1–2**

Early surgical intervention and drainage comprise the leading method of treatment for deep space neck infections,

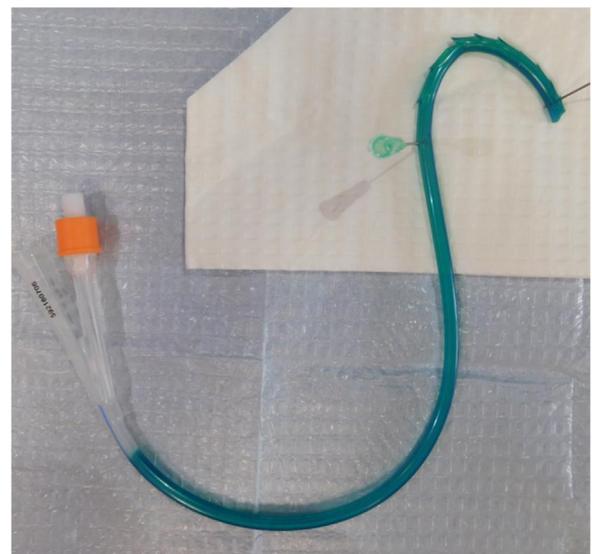


Fig. 1. Example of Foley catheter with the balloon removed and venting cuts made to allow for irrigation and drainage.

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Fig. 2. Intraoperative photograph with Foley catheter in place as a drain in the submandibular space.

but there is controversy over the need to irrigate drains postoperatively. The potential advantages of daily irrigation include a reduction in the bacterial burden and the continued drainage of necrotic tissue and purulence. Disadvantages include: the time required; the possible introduction of bacteria into the site or deeper spaces; pain and swelling secondary to distention of tissues; and continued serosanguineous drainage for several hours after irrigation.

The Foley catheter provides a good option for gravity-dependent drainage or daily irrigation. Penrose drains and red-rubber catheters contain latex, which can be antigenic and can lead to a foreign-body reaction.³ Foley catheters can be more easily directed, without tearing or folding over, their position can be monitored with imaging, and they allow easy access for irrigation and drainage postoperatively.⁴ They are as inexpensive and as easily accessible as Penrose drains or red-rubber catheters.

Ethics statement/confirmation of patients' permission

No ethics approval was required. All identifiable information about patients has been withheld.

Conflict of interest

We have no conflicts of interest.

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