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Chylo-pharyngeal fistula after radical neck dissection

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Case report

A 73-year-old man presented with a squamous cell carcinoma of his lower lip in December 1976. He smoked 15 cigarettes a day. Initial resection was incomplete and he was treated with radiotherapy; a total dose of 3600 cGy was given in divided doses over 16 days.

In June 1977, a recurrent lesion was excised and the lower lip reconstructed with a full thickness inferiorly based right nasolabial flap. In September 1977, a further recurrence was excised and a left Estlander flap used for reconstruction.

In May 1979, the patient developed a deposit in a left submandibular lymph node and underwent a left radical neck dissection. Two suction drains were left in the operation bed.

On the second postoperative day, after the patient started taking a light diet, chyle was seen in the wound drainage, and on the sixth postoperative day chyle was vomited (Fig. 1). A gastrografin swallow failed to demonstrate a leak. When the wound was explored, however, a leak in the thoracic duct was found and tied off (Fig. 2), but a breach of the wall of the pharynx was not seen.

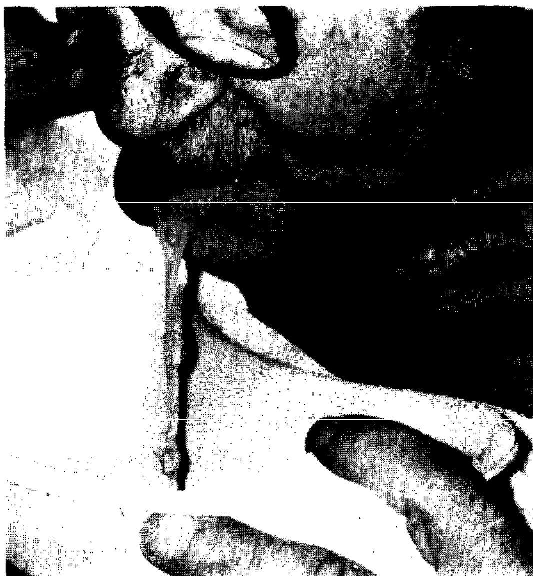

Fig. 1

Figure 1—Vomiting of chyle after radical neck dissection.

Despite this the patient continued to vomit chyle. He was treated with low fat liquid feeds and suction drainage to the wound bed and 3 weeks later chylemesis stopped.

Discussion

There are many reports of chylo-cutaneous fistulae, which are said to occur in 1 to 2% of all radical neck dissections (Thawley, 1980). It usually presents several days after surgery as initially the wound drainage contains mostly blood and serum (Conley, 1979). Chylo-thorax may also complicate this type of surgery (Har-El *et al.*, 1985). Leakage of chyle into the alimentary tract, however, is most unusual. Variations in thoracic duct anatomy and pressure from the tips of the suction drains may predispose to a chylous leak, though damage to tissue healing mechanisms by radiotherapy is likely to be a major factor (Joseph and Shumrick, 1973).

The exact route by which chyle reached the pharynx in this case is a mystery. Between two and four litres of chyle are transported daily; a major leak can cause considerable disturbance due to loss of electrolytes and protein. When such a leak is directed into the alimentary tract it may pass unnoticed, though in this case it was brought to our attention by the patient's vomiting.

Fig. 2

Figure 2—Leakage of chyle prior to ligation of the thoracic duct. The tip of the forceps indicates the leaking vessel.

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