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Short Communication

Recurrent blockage of the sucker during otological surgery: a simple solution

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Abstract
We present a unique device for unblocking the sucker during otological surgery. This device can be made cheaply, from parts already available in most hospitals, and is reliable and effective.

Key words: Otological Procedures; Suction

Introduction

Microsurgery of the ear is a delicate task which requires great attention on the part of the otologist. Recurrent blockage of the sucker during dewaxing of the ear or drilling of the mastoid bone is extremely disruptive and time-consuming, particularly when the whole sucker must be disconnected to allow probing or flushing. To overcome this problem, we propose a self-made device, which can be cheaply assembled from parts already available in most hospitals.

Method

The aim of our device is to enable flushing of the sucker with a jet of water (through its proximal end), without disconnecting the sucker from the main tubing.

A three-way stopcock is connected both to the sucker and to a length of suction tubing at the opposing ends, and to a wide bore Givings set at the third end (Figure 1a). The Givings set is then connected to a bag of saline enclosed in a rapid pressure infuser (Figure 1b), and the assembled device is held by the surgeon (Figure 2).

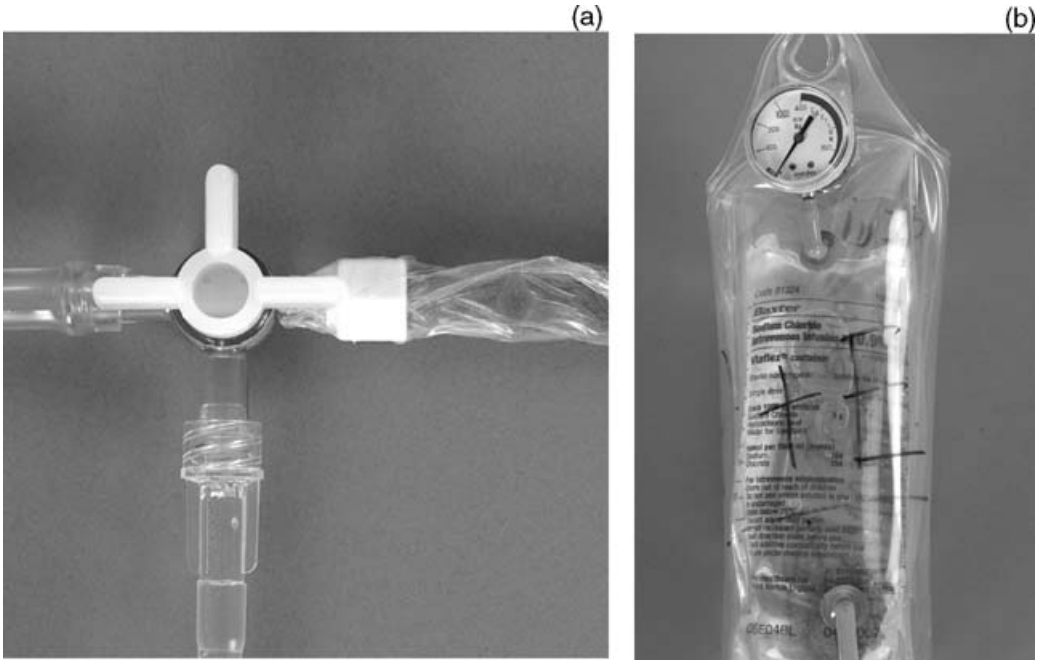

Fig. 1
(a) Adhesive dressing (Mefilm®) is used to secure the connection between the stopcock and the handle of the sucker. (b) The pressure in the bag (sphygmomanometer cuff) is turned to a minimum of 350 mmHg.

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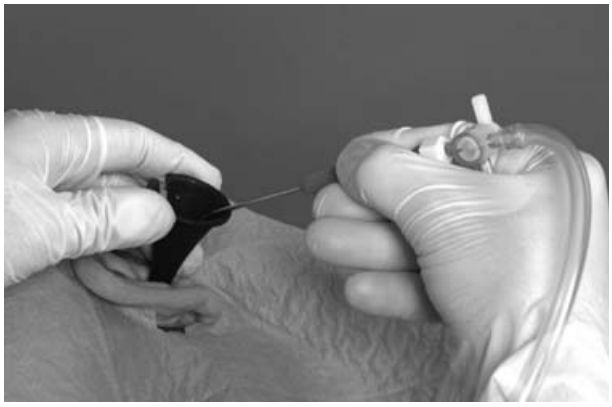

FIG. 2
The sucker is held comfortably by the surgeon, with the Givings set tube pointing downwards between the thumb and the index finger.

When the sucker becomes blocked, the lever of the stopcock is rotated 90º clockwise, thus allowing water to flush the sucker (Figure 3). The lever is then rotated backwards to allow resumption of suction. The same manoeuvre can be used to unblock a fine suction piece connected to the sucker, being careful to hold it firmly while flushing.

Discussion

Blockage of the sucker during ear surgery is almost inevitable, as suction can generate relatively large particles. The use of a ready-made device that enables instantaneous switching between suction and irrigation to clear the sucker (i.e. the Hydroflow suction and irrigation handset; Portex Ltd, Kent, England) has been previously described in the fields of microsurgery and plastic surgery.[1] However, there are no previous reports of this device being used in otology.

Our method has been used in over 15 procedures and has proved to be extremely practical. It should be emphasised that the components of the device are for single use only and should not be shared between patients (e.g. in an outpatient department), even if the sucker is changed. This is due to the fact that the stopcock can harbour traces of suctioned material, which can be ejected when the procedure is repeated.

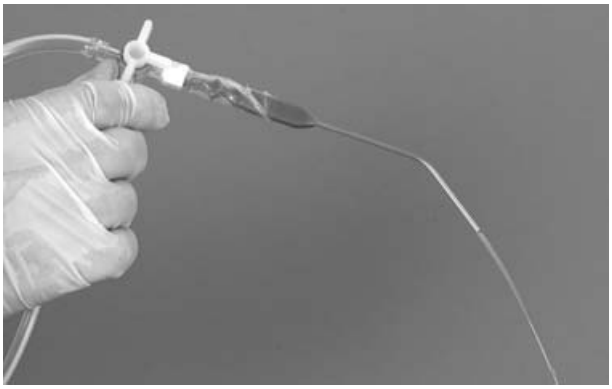

FIG. 3
By rotating the stopcock lever 90º clockwise, the sucker can be easily flushed.

Conclusion

If a sucker becomes clogged with debris during otological surgery, the described device unblocks the sucker instantly. This device can be made cheaply from parts already available in most hospitals and is reliable and effective.

Reference

1 Evans DM, Weightman B, Deane G. A new suction-irrigation device: uses in microsurgery and plastic surgery. *Br J Plast Surg* 1983;**36**:273–7

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