

Quinsy trainer

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Abstract

The implementation of the European Working Time Directive, from the Council of the European Union (93/104/EC), in August 2004 has provoked a change in the working hours of junior doctors in the United Kingdom. With the evolution of the subsequent cross-cover arrangements combined with the modernising of medical careers,¹ training is becoming increasingly important. Here we present a simple method of teaching junior doctors the skills and competencies required to aspirate a peritonsillar abscess or 'quinsy'. The model is easy to construct, low cost and reusable.

Key words: Peritonsillar Abscess; Surgical Models; Simulation; Mechanical Aspiration

Introduction

A peritonsillar abscess or 'quinsy' is one of the commonest ENT emergencies.² It occurs most frequently as a complication of acute bacterial tonsillitis.² As the infection progresses, pus may suppurate and collect around the tonsil capsule leading to the formation of an abscess, usually around the upper pole of the tonsil. The symptoms comprise of odynophagia, dysphagia, voice change ('hot potato voice') and trismus.

These patients present an interesting challenge to the ENT surgeon, as the treatment for the abscess is drainage of the pus.³ Due to the location of the abscess at the back of the oropharynx and the severe trismus caused by irritation of the medial pterygoid muscle, the procedure requires some skill and manual dexterity.

The junior ENT surgeon (pre-registration house officer, senior house officer, foundation doctor (F1/F2), intern or resident) often undertakes the procedure in the ENT treatment room. In order to ensure the procedure is carried out safely, the junior ENT surgeon should have undergone a period of training. Furthermore, delayed definitive treatment runs the risk of spread to the parapharyngeal spaces and even death due to aspiration of pus, following spontaneous rupture. As highlighted by Murphy *et al.* (2003), the majority of ENT senior house officers undergo no period of training prior to the running of an emergency ENT clinic.⁴ Here we suggest a simple model used to recreate the difficult conditions of quinsy in order to train the junior ENT surgeon.

Method

A water bomb (Product code 117/1; supplied by ASDA Stores Limited, Leeds, UK) is inflated with about 3–4 ml of water and the bomb is securely tied. This is then wrapped in a layer of gauze and manipulated into an oval shape. The water bomb and gauze are then wrapped in an adhesive tape to form a small parcel (Figure 1). The parcel is then placed inside the oral cavity of an intubation

manikin head and lodged into a representative position (Figure 2).

The intubation manikin head is then placed in the upright position, on a suitable support, and attached to an examination chair. The model can be set up in any suitable training location. The healthcare professional being instructed can then position themselves in front of the manikin head and using a head mirror, halogen light, Lux tongue depressor, white needle (19G) and syringe, can attempt an aspiration of the fluid from the oropharynx (Figure 3). This will be facilitated by direct instructions from the trainer as to exactly where the needle should be placed and a detailed description of the local anatomy.

The fluid filled parcel is removed from the manikin head after aspiration and another parcel may be inserted. Subsequent parcels may be inserted on different sides and as many times as required in order to allow the user to



FIG. 1

An example of a fluid filled parcel.

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FIG. 2
The parcel seen at the back of the oropharynx.

become competent in aspirating the fluid from the oropharynx.

Discussion

With the evolution of the 'Induction Courses' now becoming available for otolaryngology trainees, realistic

and effective training models are developing in tandem to facilitate training. Although there is no substitute for clinical exposure we feel that trainees should be given the opportunity and a chance to practise their initial attempts safely, on a model/trainer. It is also practically impossible to find the correct volume of clinical subjects, appropriate to allow training upon, on a specific day. This would also raise many difficult ethical issues.

The manikin head we have chosen recreates some of the difficult conditions present when trying to aspirate the abscess. The stiff plastic around the oropharynx restricts the degree of mouth opening therefore mimicking the trismus present *in vivo*. In order for the successful aspiration to take place this major obstacle needs to be overcome and continued practise will allow this to occur.

In clinical practice, if a simple aspiration fails to resolve the abscess and the pus once again re-collects, then a formal incision and drainage may be undertaken to allow continuous drainage of the pus.² This procedure can also be performed by replacing the water in the quinsy parcels with a more viscous fluid e.g. glucose syrup or a soap solution. An 11 blade scalpel, taped up to allow a maximum of 4–5 mm of the blade to be introduced (Figure 4) and a set of Tilley's dressing forceps (to open up the cavity entered) is the equipment we recommend to carry out this procedure. The fluid chosen will determine the degree of soiling that will occur to the manikin head from the inevitable spillage and will result in added time cleaning the trainer between candidates (with small numbers this may be more feasible).

Training on models and manikins offers a way forward in a training process involving doctors who are more junior and inexperienced than ever before. Furthermore, this method of training allows for demonstration, is repeatable



FIG. 3
(a) and (b) A doctor being instructed on the aspiration of the 'Quinsy'.



FIG. 4
The incision of the 'Quinsy' with a guarded blade.

and lends itself to the assessment of competencies necessary for the new trainees. This model is reproducible, low cost and can be used for training courses or within an ENT department for regular use.

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