

## Aspiration of peritonsillar abscess in severe trismus

K H BADRAN, AFRC SI, P D KARKOS, AFRC SI

### Abstract

We present a novel method of aspirating a peritonsillar abscess in a patient with severe trismus. In our experience, this method is efficient, allows good access to the peritonsillar area and facilitates rapid resolution of the trismus before definitive drainage can be performed.

**Key words:** Peritonsillar Abscess; Aspiration, Mechanical; Drainage; Trismus

### Introduction

Aspiration of peritonsillar abscess is a common ENT procedure performed in an emergency setting, usually by junior doctors. Although the procedure is straightforward in experienced hands, in the majority of cases, it can sometimes pose a significant challenge for the health worker. The difficulty arises when the patient presents with severe trismus, that is, limited mouth opening, making the insertion of a syringe for pus aspiration difficult or impossible. We propose an effective method to overcome this common problem.

### Methods

The main purpose of this method is to utilize an insulin syringe, the narrowest diameter syringe, to gain access to the peritonsillar area in situations in which mouth opening is severely restricted.

The required equipment consists of: a 20 ml syringe, an insulin syringe, a wide bore needle (19 F, white), a piece of suction catheter forming a sheath (14 F, 5.0 cm in length), a tape roll and lubricant (Figure 1).

The needle is attached to the insulin syringe and secured with the tape, and the syringe plunger discarded. The sheath is connected to the 20 ml syringe and lubricated. The insulin syringe is then fitted over the sheath to create a single 'long' syringe with a narrow tip (Figure 2). The use of the catheter enables a good fit between the two syringes and provides an airtight seal that prevents any leakage; this can be tested by applying suction against a closed tip.

The new syringe is then inserted into the oral cavity by sliding it over a tongue depressor to prevent injury to the tongue (Figure 3). One to two millilitres of topical anaesthetic can be squirted onto the peritonsillar area with the same syringe before commencing aspiration. An explanation should be given to the patient as cooperation is crucial to achieve the best possible result.

### Discussion

A peritonsillar abscess should ideally be drained early to promote faster resolution of symptoms, prevent

complications and reduce length of in-hospital stay. The condition is potentially lethal and can lead to pharyngeal oedema and airway obstruction.<sup>1</sup> The infection can further extend to the parapharyngeal space, leading to serious complications, such as jugular vein thrombosis and fatal carotid artery haemorrhage.<sup>1</sup> Trismus is caused by reflex spasm of the masticator muscle group, initiated by a response of the somatic afferent (pain) fibres in the tonsillar fossa and the soft palate to the infectious process surrounding the peritonsillar abscess.<sup>2,3</sup> This response can be a major obstacle to early drainage of the abscess.<sup>3</sup>

'Breaking' trismus in order to facilitate drainage of a peritonsillar abscess was first described by Hoople in 1926<sup>2</sup> and was later reported by Kveton and Pillsbury.<sup>3</sup> It was based on the fact that the sphenopalatine ganglion (located posterosuperiorly to the posterior portion of the middle turbinate) receives sensory fibres from the tonsillar area via the lesser palatine and glossopharyngeal nerves, acting as a centre point in the reflex response of trismus.<sup>2</sup> The authors described a method to anaesthetize the oral cavity through the nose by cocaineizing the ipsilateral nostril (i.e. the sphenopalatine ganglion) of a patient with peritonsillar abscess, thus breaking this response.<sup>2,3</sup> Although we have had no experience with this method, we assume that it requires certain skills and can be technically difficult to perform. In addition, cocaine may not be available in out-of-hours services.

Improvement of mouth opening following aspiration of the abscess has been objectively assessed.<sup>4</sup> Previous authors reported the results of different methods used for the management of peritonsillar abscess associated with trismus. Using serial measurements of the upper to lower incisor distance to determine response to treatment,<sup>4</sup> they showed that improvement of the mean distance 15 minutes after the initial treatment occurred in 38 per cent of the aspiration group compared with 5 per cent of those receiving antibiotics only.<sup>4</sup> Although the improvement was less than that for proper drainage (100 per cent), aspiration provided partial relief that manifested as an increase in mouth opening. This prompted us to develop a simple method for achieving aspiration by using an insulin syringe, the barrel of which has the smallest

From the Department of Otolaryngology, Countess of Chester Hospital, Chester, UK.  
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FIG. 1

Equipment required: lubricating jelly, piece of suction catheter forming a sheath (14 F, 5.0 cm in length), tape roll, wide bore needle (19 F, white), insulin syringe and 20 ml syringe.

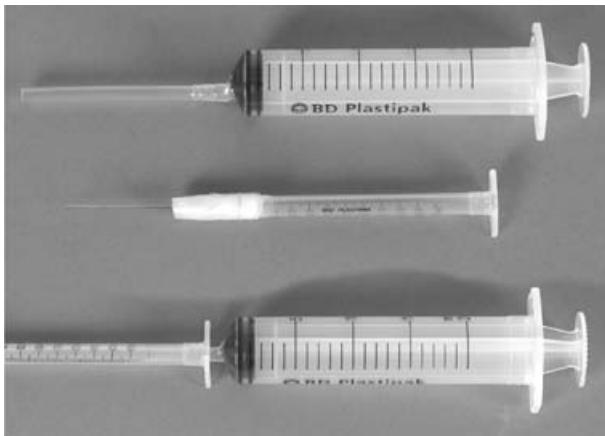


FIG. 2

The sheath attached to the main syringe (top), a needle attached to the insulin syringe and secured with tape (middle), and both syringes connected (bottom).

syringe diameter available (i.e. 6 mm). This syringe has the advantage of being easily passed into the oral cavity in cases of severe trismus that preclude the insertion of other small syringes (e.g. a 2 ml syringe). In the case reported by Kveton and Pillsbury, in which the cocainizing method was used, the inter-incisor distance was 1.5 cm;<sup>3</sup> this would have easily accommodated the barrel of the insulin syringe. Another advantage of this method is its ability to aspirate a large amount of pus (up to 20 ml) in a single procedure.

Although some ENT surgeons argued that abscesses with trismus can always be managed with a scalpel knife, we believe that this intervention should be preceded by needle aspiration to confirm the presence of pus and to identify the site of collection. In addition, performing



FIG. 3

Insertion of the 'new syringe' through a narrow gap into the oral cavity in a patient with severe trismus.

such an invasive procedure in a restricted area can be difficult and is certainly unsafe.

### Conclusion

A new method of safely aspirating a peritonsillar abscess in patients with marked trismus is presented.

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Address for correspondence:

Mr P D Karkos,  
Specialist Registrar,  
36 Hopkinsons Court,  
Walls Avenue, Chester CH1 4LN, UK.

E-mail: pkarkos@aol.com

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