Clinical findings in needle aspiration of peritonsillar abscess

M. G. DILKES & P. D. R. SPRAGGS

Department of ENT Surgery and Department of Accident and Emergency Medicine, St Mary's Hospital, London W2

SUMMARY

A retrospective study was undertaken of all patients admitted through the casualty department of St Mary's Hospital, London W2, with the diagnosis of peritonsillar abscess over a period of 4 years. Patients were divided into those in whom pus was aspirated from the peritonsillar swelling, and those in whom no pus was aspirated from the peritonsillar swelling. These two groups may be described clinically as peritonsillar abscess, and peritonsillar cellulitis respectively (Shoemaker *et al.*, 1986). Relevant details from the history, examination, and investigations were recorded. The results were compared in order to determine whether there was any difference in the details recorded between those patients with pus aspirated and those with no pus found. Of the 70 patients admitted with this diagnosis over the last 4 years, full data was available in 55 cases. Pus was found on routine needle aspiration of the peritonsillar swelling in 35(63%) cases. There was no pus found in 20(37%). There was no significant information recorded that would have predicted the presence or absence of pus in the peritonsillar space.

INTRODUCTION

Quinsy, or peritonsillar abscess, is a relatively common ENT emergency, and is the most common abscess in the head and neck (Beck, 1952). The condition occurs when there is an acute infection in the space between the tonsil and the superior constrictor muscle, the peritonsillar space. This infection is usually secondary to a preceding tonsillitis. Of the 55 cases studied, 33(59%) were direct referrals from casualty, 20(37%) were referrals from General Practitioners, and 2(4%) were from other sources. Quinsy presents with painful dysphagia, trismus and pyrexia. On

Correspondence: Mr M. G. Dilkes, Lecturer in ENT Surgery, The London Hospital, Whitechapel Road, Whitechapel, London E1, U.K.

examination there is an inflamed peritonsillar swelling, extending into the soft palate and often pushing the uvula to the contralateral side. The patient may also have tender submandibular lymphadenopathy, and be dehydrated. A granulocytosis is common. The Paul-Bunnell test is usually negative (Portman *et al.*, 1984). Standard treatment involves the administration of local anaesthetic spray to the affected area, followed by needle aspiration with an 18 gauge needle at the site of maximum swelling. Any pus found is aspirated. The patient is admitted, and intravenous Penicillin, 1 megaunit 6 hourly, and rectal metronidazole, 1 g 8 hourly are administered. If there is a reaccumulation of the pus, repeat aspiration or incision and drainage should be attempted. Intravenous fluid replacement is often necessary.

The clinical importance of the condition lies in the fact that serious complications may occur, if extension beyond the peritonsillar space occurs. Lateral extension may result in a parapharyngeal abscess, which may involve the carotid sheath, leading to erosion of the carotid artery, or thrombosis of the internal jugular vein. Intracranial spread may occur, via superior extension into the skull base. Inferior extension to involve the pharyngeal and laryngeal mucosa may result in upper airways obstruction, or rupture of the abscess into the airway. Inferior extension may also track down the fascial planes into the chest, causing mediastinitis (Lee *et al.*, 1986).

PATIENTS AND METHODS

The notes were examined of all those patients admitted over the last 4 years with the diagnosis of quinsy. Of the seventy admissions, full details were available in 55 cases. Nine different aspects of the history, examination and special investigations were recorded, with respect to both groups (Table 1). The history in all cases revealed differing degrees of trismus, painful dysphagia, and malaise.

DISCUSSION

The results show that none of the signs, symptoms or tests performed routinely will predict the presence or absence of pus in the peritonsillar space. Pus in this space probably indicates a later stage of the disease (Fried & Forrest, 1981). Where pus is formed by liquefaction of dead tissue, bacteria and white blood cells by the enzyme lysozyme which is released by the destruction of the white cells by toxins produced by the bacteria (Muir, 1983). However, the acute inflammatory process, which gives rise to the symptoms and signs, remains constant until the condition begins to resolve. Therefore, Quinsy can be thought of as being in two stages, the early stage when pus has not yet formed, and the later stage when pus has formed. Aggressive treatment with suitable intravenous antibiotics can arrest the disease process such that pus may not develop from the early stage (Brandow, 1973). However, the fact that there is no clinical or easily available haematological way to

Table 1. Information recorded with respect to both groups of patients.

	Pus found on needle aspiration n=35 (63%)	No pus found on needle aspiration n=20 (37%)
Average age in years:	29.8	29.5
Sex— Male	57%	35%
— Female	43%	65%
Previous quinsy	14%	5%
Previous tonsillitis (more than two attacks per year)	20%	35%
Temperature on admission in degrees centigrade (average)	37.7	37.8
Average white cell count (*10 per millilitre.)	14.1	15.7
Patient clinically dehydrated	82.8%	80%
Associated tender cervical lymphadenopathy	74.3%	75%
Average length of hospital stay (days)	3.4	3.35

distinguish between the two stages, means that needle aspiration of the peritonsillar swelling remains the most reliable way of not only making the diagnosis, but also of relieving the pain of the condition, should pus be drained.

REFERENCES

- Beck A. L. (1952) The influence of the chemotherapeutic and antibiotic drugs on the incidence and cause of deep neck infections. *Annals of Otolaryngology* **61**, 515–32.
- Brandow J. r, (19) Immediate tonsillectomy for peritonsillar abscess. *Transactions of the American Academy of Ophthalmology and Otolaryngology* **77**, 412–6.
- Fried M. P. & Forrest J. L. (1981) Peritonsillitis: Evaluation of current therapy. *Archives of Otolaryngology* **107**, 283–6.
- Lee K. J., Traxler J. H., Smith H. W., *et al* (1973) Tonsillectomy: Treatment of peritonsillar abscess. *Transactions of the American Academy of Ophthalmology and Otolaryngology* **77**, 417–23.
- Portman M., Ingall D., Westenfelder G. & Yogeve R. 1983. *Muir's Textbook of pathology*. Edition 12. 4.29–4.30. (1984) Peritonsillar Abscess complicating Infectious Mononucleosis. *The Journal of Pediatrics* **104**(5), 742–4.
- Shoemaker M., Lampe R. M. & Weir M. R., Peritonsillitis: abscess or cellulitis? *Pediatric Infectious Diseases* **5**, 435–9.