



Awake fibre-optic intubation in crisis?

In this month's issue of Trends in Anaesthesia and Critical Care, Grange et al. [1] present their survey results from 527 UK based Difficult Airway Society (DAS) members who had performed awake fibre optic intubation in the previous 2 years. Their study is well timed given the anticipated publication of DAS Awake Tracheal Intubation (ATI) guidelines. This article displays the wide variety of techniques used in UK practice in performing awake fibre-optic intubation (AFOI) in patients with anticipated difficult airways. It also draws attention to an important discussion point: anaesthetists are performing fewer AFOIs. This raises concerns with on going training, maintenance of competency and allows a timely reflection on how we are managing the anticipated difficult airway. In particular, with the emerging role of video laryngoscopes [2], is an alternative first line approach to awake intubation a reality?

1. Why are anaesthetists performing fewer AFOIs?

The majority of questionnaire respondents (53%) to the Grange et al. survey had performed less than five AFOI cases within the previous two years, with only 15% performing over 20 per year. These are low numbers from anaesthetists who are DAS members with a presumed interest in the difficult to manage airway.

The authors point out several potential reasons behind lower AFOI rates. There may be individual reluctance to perform a technique which is known to be difficult to master and requires regular practice to maintain [3]. In the survey, 6% of anaesthetists reported failed AFOI in the last 2 years, and with complication rates reported to be as high as 21%, this alone could be reason enough for the reduction in use of the technique.

ATI is required in only 0.2% of all tracheal intubations in the UK [4], giving very few opportunities for training and skill maintenance. However, securing an airway awake is considered to be a gold standard for managing predicted difficult airway and is an essential skill for every practicing anaesthetist. Huitink et al. [5] suggest that airway management is a highly complex procedure that is better thought of in terms of complexity factors - sensitive to both context and time. Their proposal for a re-thinking of the current airway assessment points out that other, non-patient factors contribute significantly to the difficulty of 'the difficult airway'.

2. How concerned should we be?

Our airway enthusiasts are not doing many AFOIs and whatever the reasons behind the reduction, Grange et al. highlight concerns with its demise. The low number of AFOI cases has large implications for training in airway management, as anaesthetists do not have the exposure to this essential skill. We are in danger of having an experience deficit in the near future where AFOI is rarely

performed. Fourth National Audit project (NAP4) [4] recommended that 'all departments should provide a service where skills and equipment are available to deliver AFOI'. Will the average anaesthetist comply and deliver AFOI expertise, given the paucity of experience that this survey of DAS members appears to suggest?

The Royal College of Anaesthetists' UK curriculum encompasses competencies that can be achieved, but no on going assessments are made for maintenance of skill, especially in senior anaesthetists [6,7]. This lack of AFOI skill amongst experienced clinicians is well documented in the NAP4 report [5]. It is clear that experience in the AFOI is more relevant than seniority of anaesthetist performing it [8].

Experience of technique, time pressure, cost and human factors are all important contributing factors that may sway an anaesthetist to choose more familiar general anaesthesia as an alternative to ATI with serious consequences [5]. Having an ATI technique that is easy to learn and offers a number of opportunities for practice and skill maintenance is critical if this important skill is to survive.

3. Alternatives to awake fibre-optic scope guided intubation

If we are to save the ATI from becoming a technique that very few anaesthetists use, we may have to look for an alternative device to the flexible bronchoscope. A desirable ATI device needs to be effective, easy to learn, widely available, inexpensive and frequently used in an elective environment to allow adequate opportunities for the skill, once acquired, to be maintained.

A number of devices have been used for awake intubation with varying success [9–12]. However, they do not satisfy the above criteria as most of them lack the effectiveness, versatility of use and availability that flexible fibre-optic scopes have. Videolaryngoscopes, on the other hand, satisfy most of the criteria of a desirable ATI device and may be the solution to the problems associated with flexible scopes.

Videolaryngoscopes have been shown to be widely available, easier to learn and less expensive compared to the flexible scopes [13–15]. Furthermore, these devices are widely used, often as a first-line device in all tracheal intubations, gaining the advantage of familiarity and experience. Videolaryngoscopes have a number of design features that assist the awake technique [16]. They create space within the airway, allowing a direct view for suctioning and effective administration of local anaesthetic. The wide view aids recognition of airway anatomy, avoiding blind railroading and diminishing view on approach to the glottis associated with fibre-optic scope use. Most importantly video laryngoscope guided awake intubation has been shown to be faster with equal success rate and no difference in complication rate or patient satisfaction

when compared to AFOI [17,18].

There will no doubt be some system pressures that influence the anaesthetist's choice of technique in this current climate that prioritises efficiency, economy and performance. The logical next step may be to find out how widespread and frequent are the use of videolaryngoscopes and other devices for awake intubation.

4. What next for AFOI?

This survey goes some way to suggesting a shift in the UK practice away from AFOI that is likely to be replicated in other countries. It highlights the problem of reduced AFOI rates and raises concerns of how to maintain and train our anaesthetists in this technique.

Locally run courses and airway training blocks that focus on ENT, head and neck and bronchoscopy lists may allow ongoing exposure to awake intubation for both trainees and experienced clinicians. These local airway training opportunities are often underused due to organisational issues.

Simulation training can replicate to some degree the complexity factors related to advanced airway management. Simulation can increase familiarity with equipment and technique, but has difficulty in replicating common complications, like over sedation and inadequate airway topicalisation and it is not widely available.

A comprehensive guide on awake intubation is likely to lower the performance threshold and increase the overall number of awake intubation training opportunities. DAS ATI guidelines, due to be published this year, should provide support for clinicians who want to acquire and maintain this skill by providing evidence based direction on how to best perform awake intubation.

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