

Editorials

The interface between anaesthesia and emergency medicine

Ten years ago, the Association of Anaesthetists of Great Britain and Ireland published a document outlining the role of anaesthetists in the emergency service.¹ Despite a wide range of activities, in most hospitals the main interface between the two specialties was in the emergency management of a patient's airway. Anaesthetic assistance would generally be sought for any airway intervention beyond the most basic and specifically in the presence of airway compromise or when drugs needed to be administered to facilitate tracheal intubation. Similarly, with a range of "time critical" conditions other specialists were called to assist; cardiologists would deal with patients suffering from an acute myocardial infarction, physicians with the acute asthmatic patients while surgeons resuscitated trauma patients. Such working practices had their origins in the casualty departments of the 1960s, where the medical staff were often "supervised" by other specialties, for example, orthopaedic surgeons, whom were often little more than absentee landlords as a result of a lack of sessional allocation and with little experience or interest in dealing with medical admissions.²

The past 15 years has witnessed a dramatic change in the specialty of emergency medicine. The development of a structured training programme, fellowship examination and intercollegiate faculty, have produced a breed of emergency physicians who now manage most time critical conditions within their own departments. At a time when increasing emphasis is placed upon the importance of early and effective airway management of all major emergencies (ATLS, ALS, APLS), emergency physicians are now looking at extending their airway management skills, which will inevitably mean the administration of anaesthetic agents and muscle relaxants to facilitate tracheal intubation.^{3,4} Delays in obtaining anaesthetic assistance,^{4,5} the relative inexperience of the responding anaesthetist⁶ and the fact that some emergency physicians may have greater experience of dealing with patients' airways in these circumstances have also accelerated moves towards greater responsibility. Finally, emergency physicians see their counterparts in the USA and Australia, performing advanced airway interventions, including the administration of drugs to facilitate intubation.⁷

This has caused concern among some anaesthetists, who are of the opinion that advanced airway management including the use of drugs to facilitate tracheal intubation in the emergency department is highly likely to be complicated; patients may have a full stomach, be unable or unwilling to provide any medical history, or have trauma complicating airway management. Therefore, only those with the most experience should perform rapid sequence induction and intubation. Furthermore, it is known that the reported incidence of failed and difficult intubations in the emergency department^{7,8} is approximately three times greater than seen in the operating theatre^{9,10} and the equipment to deal with such events may not always be immediately available.¹¹ Finally, even if intubation is successful who is going to take over the management of such a patient, who may require continuing anaesthesia?

Does this dilemma threaten the interface between the two specialties or is there a solution? My personal beliefs are; firstly, we have to abandon the idea that "rapid

sequence intubation" equates with airway management. Trainees must be taught the assessment *and* airway management of a critically ill patient. This includes decision making and accepting responsibility. Secondly, it is less important who manages these patients, but the competence with which they do so. By default, emergency physicians will have to deal with this problem with increasing frequency. Changes in the working practices of anaesthetists of all grades will result in increasing difficulty obtaining experienced assistance. In recognition of this, the Faculty of Emergency Medicine have identified that in future, all emergency physicians will need to acquire the necessary skills to manage a patient's airway for the initial 30 minutes after admission. In some instances this will require the administration of drugs to facilitate tracheal intubation safely. Finally, it is important not to try to turn emergency physicians into anaesthetists, but instead equip them with the skills they need for their own environment and the problems they face.¹² Audit of all of these processes will be mandatory to ensure that training is adequate and appropriate.

Laudable as such aims may be, how do we achieve them? One suggestion is that the doctors working in emergency medicine would benefit from a substantive post as an anaesthetic SHO.¹³ While this may provide training in airway management, it is less likely to provide experience in assessment and management of critically ill patients unless a period in critical care is included. Unfortunately, the availability of such posts has diminished recently as they have been absorbed into local rotations. The value of such posts is not universally accepted, while some suggest a need for "ring-fenced" posts in anaesthesia linked to emergency medicine,¹⁴ others have expressed the view that efforts should be directed towards ensuring anaesthetic support in the emergency department,¹⁵ a view supported by some who see airway management as a collaborative responsibility.¹⁶

For many trainees in emergency medicine, experience to fulfil training requirements will only be available in the form of an anaesthetic secondment into a supernumerary post for three to six months. If this is the case, they must be offered the opportunity of learning assessment and management of the airway in the critically ill patient. This will mean not just watching countless patients being anaesthetised for elective surgery, but time training and experience in the intensive care. Clearly defined competencies must also be identified in order to equip them to face the problems in their own unique environment. The current basic skills, listed in trainees' logbooks are insufficient. All of this must mean closer cooperation between the two specialties, starting at collegiate and extending down to departmental level. Other recent developments, for example the Emergency Airway Management Course¹⁷ may have a place. This teaches the fundamentals of induction of anaesthesia, intubation and management of the difficult airway but is based on American practice. Although it may offer the opportunity to introduce trainees to the subject, the techniques and skills learnt must be in accordance with UK practice otherwise this could lead to conflict between emergency physicians, anaesthetists and intensivists.

Apart from initial training, of at least equal importance is the problem of maintenance of skills. Although some individuals working in large departments may have the opportunity to practise their skills on a regular basis, and thereby remain competent, many in smaller units will not. Regular short secondments within anaesthesia are a good idea, but in practice may be difficult to organise and cannot guarantee that individuals will encounter the type of situations from which they would benefit.

In the UK, one area that has been particularly slow to develop is the use of high fidelity simulators, due predominantly to both the high capital and revenue costs. As well as being used to facilitate learning and maintenance of the range of isolated technical skills management of entire clinical scenarios can be practised. In anaesthesia they have been shown to improve crisis management, speed of response and precision in following guidelines.^{18,19} All skills and events can be tailored to each individual's requirements, for example ranging from the routine of planned induction of anaesthesia to the very rare, but life threatening situation of "can't intubate, can't ventilate". These events can be repeated and practised endlessly without any risk to patients. Such training opportunities would require close cooperation between the anaesthetic and emergency medicine departments, to achieve maximum benefit to both specialties. The recent introduction of less expensive simulators such as the Laerdal SimMan (Laerdal Medical Ltd UK) may lead to such facilities becoming increasingly available in the near future.

Anaesthetists have to accept that in the future, on many occasions, airway management in the emergency department will be the remit of emergency physicians. If as anaesthetists, we wish to influence and guide this group towards what we perceive as best practices, then rather than putting up barriers, we should be building bridges to

strengthen the interface between our specialties. It would be sadly ironic if all the areas of cooperation were jeopardised by our inability to recognise the opportunity that lies ahead.

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Improving the care of the seriously ill patient: the interface between the accident and emergency department and critical care areas

If you were suddenly taken ill with an acute medical condition where would you go, and who would you like to have treat you? In the UK, acutely ill patients are usually sent, taken, or self refer themselves to the nearest accident and emergency (A&E) department. There, in the current climate of healthcare provision, they will be attended to in an inconsistent manner.¹

Ignoring here the valuable contribution that nurses make in the A&E department and considering only medical care, ideally a consultant in A&E medicine will see the patient immediately. However, often it may be a trainee from one of the acute specialties, and only some hours later. It is possible that this variability in practice costs lives because of inexperience in appreciating how sick a patient is, despite a plethora of warning signs.

Here I am dying of a hundred good symptoms.
Alexander Pope, English poet 1688-1744.

The initial treatment given by these on call trainees, as well as being delayed, may also be suboptimal, even though evidence is accumulating that early, and appropriate, treatment along physiological lines in the emergency room can have a long term positive effect on outcome.²

How can this scenario be improved? The two key elements are education and multi-specialty, as well as multi-professional, working patterns by which senior clinicians see and supervise the care of such patients.

The treatment benefits from a formal, but prompt, assessment of serious conditions such as major trauma and myocardial infarction are now appreciated. The use of protocols is helpful and, working within a defined framework of care or "use of a common language of care" as seen in major trauma, ensures all know what is expected. Progress is now being made in expanding the experience gained in these areas to caring for the seriously ill patient in general.

It is recognised that there are a number of problems that need to be tackled. The interfaces between the ICU, HDU, A&E, MAU and the medical on take team are often unclear.¹ The Royal College of Physician's Working Party on the Interface between Intensive Care and Emergency Medicine, which is to be published later this year, has heard repeatedly of the problems in A&E departments. Specifically, the large number of medical emergencies is causing difficulties because of a shortage of doctors and beds. The introduction of MAUs is recognition of the fact that seriously ill patients are best grouped together where