Intubating ability of house-officers in University Hospital, Kuala Lumpur

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Summary
A survey showed only 27% of our house-officers know how to intubate. Ninety-two percent however recognise the alternative to intubation. On the whole, knowledge centering around intubation is generally lacking.

Key words: House-officer, intubating abilities.

Introduction
The ability to intubate is one of the crucial requirements for a successful outcome in cardiopulmonary resuscitation in the wards. It has recently been recognised in some British hospitals that this ability is lacking in their own house-officers (HOs) and remedial action is now being taken.

An assessment along similar lines is undertaken here so that our own house-officers who form the frontline team in ward resuscitation can be properly trained if they show the same standard as their British counterparts.

Method
Twenty-six house officers in UHKL (doing either surgical, orthopaedic or O & G and spending time in OT between February 1987 and June 1987) were assessed individually in the OT induction room on the following:

a) Ability to fix blade to handle of laryngoscope.
b) Intubation (and time required).
c) Recognising the best alternative to intubation.
d) Recognising the size of endotracheal tube to be used.

Patients for intubation were induced with thiopentone and relaxed with suxamethonium. Only healthy adult patients in the elective lists were used. All patients whom the anaesthetist judged as being difficult (short neck, receding chin, missing teeth etc.) were not used for the purpose.

Pre-oxygenation was carried out before intubation was allowed in the presence of the anaesthetist (lecturer) who would intervene rapidly if the house-officers proved incompetent. The ability was determined with three intubations on three different patients. A successful outcome was one where the candidate successfully intubated at least two of the three patients. The speed
of intubation was equal to the time the laryngoscope was taken in the hand to the time the
endotracheal tube was in and the laryngoscope put down on the trolley.

Testing the recognition of the best alternative to intubation in the ward was in the form of
an M.C.Q.:

i) Call seniors and in the meantime do not attempt further.
ii) Use an ambu bag and a mask.
iii) A tracheostomy should be done by whoever is the most experienced present.
iv) A cricothyrotomy should be attempted.
v) Use mouth-to-mouth or mouth-to-nose breathing.

Results

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<th>Percentage</th>
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<tr>
<td>1. Had intubation taught in medical school</td>
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<td>2. Ability to fix blade to handle</td>
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<td>3. Ability to intubate*</td>
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<td>4. Recognising the best alternative to intubation</td>
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<td>5. Recognising correct tube sizes for neonates</td>
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<tr>
<td>infant</td>
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<td>children</td>
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<td>adult</td>
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*Average time required for intubation by the successful candidates was 38 seconds with a range of 12 to 115 seconds.

Discussion

Most of our house-officers are graduates from the Faculty of Medicine of the University of
Malaya and although attempts are made to teach intubation in year four (via the use of
mannequins and anaesthesised patients), only 27% still retain this ability when they become
house-officers. This figure is comparable to those from St. Bartholomew's Hospital, London1
and from the Departments of Medicine and Emergency Medicine, University of Colorado Health
Sciences Centre, Denver, U.S.A.2

For those who were able to intubate, the average time taken was 38 seconds. Hence this group
will still do miserably in the Advanced Cardiac Life Support Examination3 in the United States
where the upper limit is 35 seconds.

It was comforting however to realise that at least 92% of them recognised that the best alternative
to intubation in the ward was to use an ambu bag and a mask. This survey however does not
make an attempt to differentiate whether they recognise that intubation periods should be
kept short in the ward and that the bag and mask should be considered sooner than is usually
the case.

Knowledge centering around the laryngoscope and endotracheal tubes is sadly lacking. This
inadequate knowledge may actually contribute to prolonging the hypoxia in a cardiopulmonary arrest patient in the ward.

**Conclusion**

Courses in cardiopulmonary resuscitation with special emphasis on intubation and management of the airway should be made compulsory in the undergraduate programme. Another course in the early housemanship posting is required to reinforce this as our survey showed only one in four will retain the skill after a lapse of two years.

**Acknowledgement**

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**References**


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