

Visibility of pharyngeal structures as a predictor of difficult intubation

We would like to comment on the study by Samssoon and Young (*Anaesthesia* 1987; **42**: 487-90) since we also have experience with the test^{1,2} which forms the basis of their report. Mallampati's test scores the visibility of pharyngeal structures (faucial pillars, soft palate and uvula) in an attempt to predict difficult tracheal intubation. Three of us used this test as part of a pre-operative assessment in a study about tracheal intubation.

Samssoon and Young did not make it clear in their paper but they did not make the assessment in the way described by Mallampati. We also chose to examine our patients with 'the head in the neutral position' and the observer sitting 'opposite at eye level'. We graded patients class 1 to 3 as originally described because Mallampati did not describe a class where none of the soft palate was visible.

All three of us suggested independently that the test should be abandoned after a relatively short period because we considered that it was subjective and far too inconsistent in any given patient. The class 3 assessment (soft palate only visible) was found in 9/28 (32%) of patients by one of us and 4/32 (12.5%) by another. The third person involved, who is also a qualified dentist, exhausted his patience with the inconsistency of the test before a similar number of cases were documented. Only one of the 13 patients who were class 3 presented any difficulty at intubation; she had grade 3 laryngoscopy (tip of epiglottis only visible),³ and for the remainder, the laryngoscopy was grade 1.

This information does not, of course, permit us to infer that the newly described class 4 (soft palate not visible) is not important. We did not, like Mallampati, recognise this category and suggest that Samssoon and Young need to be more precise about how it is defined (when limited to visual inspection). However, we can reasonably assume that the patients we recorded as class 3, would also be assigned similarly by these authors. Our experience does not allow us to agree with their contention that class 3 is a useful predictor of difficult intubation.

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References

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A reply

Thank you for the opportunity to reply to this letter. The objective of our brief paper was to indicate that the less space there is between the posterior third of the tongue and the roof of the pharynx (which corresponds visually to loss of sight of pharyngeal structures), the greater is the likelihood of difficulty in visualising the laryngeal inlet.

Many anaesthetists who fulfill emergency commitments are relatively junior. If a test exists which suggests beforehand that there may be a difficulty, for example before embarking on a Caesarean section or on a laparotomy for intestinal obstruction, then, in our opinion, that anaesthetist will be alerted to possible problems. If the particular fear proves ill-founded (as, I agree, happens quite frequently), then at least the patient has not been placed at risk. One of our junior staff within the last few months used the test and refused to anaesthetise a patient without senior help. The author was the consultant who went to help and who failed to intubate the said patient using standard methods of induction for a patient for Caesarean section!

None of my colleagues finds any difficulty, inconsistency or boredom in undertaking the test.

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Ergometrine and bronchospasm

It has been reported that bronchospasm may follow administration of ergometrine (ergonovine) in clinical practice.¹⁻⁴ The mechanism of this effect is not established. However, Sakamoto and others⁵ recently proposed, on the basis of studies conducted in isolated canine bronchi, that it is due to a direct action on bronchial smooth muscle and, further, that the effect may be due to the partial agonist activity of ergometrine at serotonin (5HT) receptors.⁵ We investigated this possibility using isolated human bronchial smooth muscle. Human bronchus was obtained from lung removed at surgery from six patients who underwent

pulmonary lobectomy for carcinoma of the lung. Samples of bronchus 3-5 mm in length (internal diameter 3-7 mm) were dissected free from surrounding tissue and studied as intact segments under a resting tension of 1 g by a conventional tissue bath technique.⁶ Ergometrine maleate 10^{-9} – 10^{-4} M was added cumulatively to the bath. Ergometrine, either in the presence ($n = 19$) or absence ($n = 3$) of indomethacin 10^{-5} M, a cyclooxygenase inhibitor, failed to cause contraction in any preparation despite demonstrable contractions in response to histamine $1-3 \times 10^{-6}$ M or carbachol 10^{-6} M. In some preparations a degree of tone was in-