obstruction was due to the patient's Parkinsonism in combination with manipulation of his medications.

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Further reflections on "a blind guided technique for endobronchial intubation"

Since publication of my description of the blind technique for placing endobronchial tubes[1], I have demonstrated it many times and produced a video to help anaesthetists understand the technique. Questions arising from these demonstrations have led me to modify a few features.

I think it might help those who have found the technique useful if I describe the points that I have learnt to highlight from the questions during demonstrations.

(a) The original description recommended that the largest tube that was long enough should be selected. This is probably not the optimal strategy as some patients have main bronchi much smaller than the trachea. Thus, the SMALLEST diameter tube that is long enough should be selected. This is particularly important when a left main bronchus is to be intubated. It seems that the left bronchus is likely to be smaller than the right, perhaps because the left lung capacity is normally less than the right.

(b) The original text did not emphasize the identification of the moment that the overinflated endobronchial cuff plugs the main bronchus, yet this is a critical instant.

Three changes may help to identify this occurrence. As the bronchial cuff enters the main bronchus:

1. There should be an obvious change from bilateral to unilateral lung inflation. This change may not always be a visible change in expansion but should be apparent by auscultation.
2. The compliance on inflation should be about halved.
3. There should be a marked resistance to the further distal progression of the endobronchial tube as the over-distended bronchial cuff is pushed into the main bronchus. This may be less obvious for a right-sided insertion than a left because of a larger diameter in the right side.

I hope that these amendments to the technique which I have learnt from anaesthetists interested in this approach can help others when they need to insert an endobronchial tube.

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Reference

1. Russell WJ. A blind guided technique for placing double-lumen endobronchial tubes. Anaesth Intens Care 1992; 20:71-74.

Two methods of measuring oxygen saturation: why the Bland and Altman statistical technique is necessary

Lewis and colleagues have tested the reliability of fibreoptic oximetric catheters in vivo[1]. We disagree with the statistical analysis tools used to compare this method with a laboratory oximeter and the subsequent conclusions.

Most spreadsheets and data-base computer programs provide the correlation coefficient when performing regression analysis, but it must be remembered that correlation and regression are distinct methods and serve diferent purposes. Correlation reduces a set of values to a single number which bears no direct relation to the actual data. The use of correlation is for generating hypotheses and not for testing them, unlike regression which establishes a relationship between two sets of variables.

Figure 2, from Lewis's paper, is a simple plot of the oxygen saturations obtained with the fibreoptic oximetric catheters against those from the laboratory oximeter[1]. The regression of the fibreoptic catheter saturation (FCS) against the laboratory oximeter saturation (LOS) is a straight line that allows derivation of a FCS value for any value of LOS. From the cluster of points about the regression line one would (falsely) assume there is strong agreement between the two methods. However Feinstein, as long ago as 1976, voiced his concern of the misuse of correlation and regression to compare methods of clinical measurement[2]. Correlation coefficient measures the strength of relation between the two variables and not the agreement between them[3]. The measurements from the two methods of measuring oxygen saturation are related but this is expected as both were specifically designed for this purpose[4].

Bland and Altman recommended an accurate and meaningful representation of the data using simple calculations and graphics[4]. In this case, a plot of the difference between the paired results from the two methods of measurement, y=FCS—LOS, against the mean of the paired results, x=(FCS+LOS)/2, would reveal the agreement of the data. Figures 1 and 2 are reproduced from Bland and Altman's paper (with their permission) to emphasize this point[4]. These graphs display the measurement of peak expiratory flow rates obtained with a mini and a large meter. The data points are clustered about the regression line with a correlation coefficient of 0.94 (Figure 1). This confirms the expected relationship between the two meters. The second plot shows the data is widely spread (Figure 2). The mini meter readings may be 76 l/min greater or less than those of the large meter. The lack of agreement between the two methods is only obvious in Figure 2.