Four experiences in intubation of one patient with Still's disease

Sir,—Miss C. W., a cheerful co-operative patient aged 32 yr, suffers from rheumatoid arthritis in general and Still's disease in particular.

The first operation planned for her was a hip replacement; the anaesthetist hopefully administered thiopentone and suxamethonium; laryngoscopy proved impossible; the mouth opened fully, but no view of the larynx could be obtained. A very experienced consultant anaesthetist was sent for, and the two spent 90 min attempting to intubate the trachea, using oral tubes, nasal tubes, stylets and guide wires, and several kinds of laryngoscope. At the end of this time, the operation was cancelled, the patient was allowed to waken and she was sent back to the ward.

For the next visit to theatre, a flexible bronchoscope as used by thoracic surgeons was obtained, and the patient was kept conscious, well sedated, and extensive topical anaesthesia of the upper respiratory tract was used. No view of the larynx could be obtained with the bronchoscope, used either orally or nasally. It may be stressed that neither of the two consultant anaesthetists present on that occasion was very experienced with the use of that instrument. Eventually, retrograde cannulation of the larynx through the cricothyroid membrane, using a Tuohy needle and an extradural catheter which was brought out through the nose, proved successful. The time to induce anaesthesia on this occasion was 2 h.

On the third occasion, retrograde cannulation of the larynx was used at once, and was successful in about 30 min.

Miss C. W.'s fourth visit to theatre was deliberately delayed for 2 yr; this allowed time for elaborate preparation. A flexible laryngoscope, supplied by Specfield and made by the American Optical Company, was obtained; one anaesthetist had performed more than 300 intubations with it on normal patients under general anaesthesia; Miss C. W. was sent for again, and basal sedation and a local anaesthetic were given. On the first attempt at oral laryngoscopy, an excellent view of the larynx was obtained, and the laryngoscope passed through into the trachea, and the endotracheal tube was "rail-roaded" along it without difficulty.

The flexible laryngoscope has been used successfully in several other patients in whom intubation by conventional means was difficult.

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References

Ventilator for intermittent mandatory ventilation

Sir,—Intermittent Mandatory Ventilation (IMV) has been shown to be a useful technique in the management of patients who need respiratory assistance, but retain some spontaneous respiratory activity. Unfortunately, there are at present only a few ventilator models which can be used for IMV without modification.

The Ambu "E" non-return valve may be used to modify any ventilator capable of operating at low rates. If the expiratory valve diaphragm of this valve is removed, a patient being ventilated by a ventilator through the valve may breathe freely through the expiratory port at all times except during the inspiratory phase of the ventilator. An oxygen-enriched and humidified airflow for the patient’s spontaneous breaths may be supplied by delivering the airflow from a fan-operated humidifier such as the Marshall Spalding to a Gilston "cigar" T-piece, which is fitted to the expiratory port of the Ambu valve. A short length of plastic hose on the expiratory side of the T-junction will prevent breathing of room air at the high flow supplied by this type of humidifier. To make a firm fit with the Gilston "cigar" it may be necessary to saw off about 1 cm of the indented expiratory port of the Ambu valve.

To apply IMV it is only necessary to set the ventilator at the desired rate and tidal volume for the mandatory breaths. The Ambu valve will prevent any gas from returning to the ventilator via its expiratory hose, so total patient ventilation may be measured by attaching a respirometer to the expiratory port of the valve.

Although this IMV system uses a separate gas supply for the mandatory and spontaneous breaths, it is not difficult to provide the same oxygen concentration for both. Its chief advantage is the ease with which it can be devised with existing equipment.

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