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What is This?
Oral endotracheal intubation of rabbits (Oryctolagus cuniculus)

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Summary

Endotracheal intubation of rabbits is reported, both personally and in the literature, to be so difficult that special equipment has been constructed by other workers to facilitate the procedure. We report that the positioning of the operator, behind the animal, viewing from the dorsal surface of the head, facilitates this procedure enormously.

Keywords

Endotracheal intubation; rabbits; Oryctolagus cuniculus

To begin a study involving insufflation of drugs into the lungs of anaesthetized rabbits we required a method of endotracheal intubation which was quick, not traumatic to the rabbit's larynx and airway and which could be performed with certainty. All these requirements were directed to causing the least possible physiological stress and distress to the rabbits thus improving their welfare.

Tracheal intubation of the rabbit has been reported to us personally, and in the literature (Davis & Malinin 1974, Hoge et al. 1969, Schuyt & Leene 1977) as being difficult because of the mobility and anatomy of the larynx and upper airways. Special equipment has been designed to facilitate intubation (Schuyt et al. 1978) and a method relying on breath-sounds has been described (Alexander & Clark 1980). Ingenious methods, such as that of Kruger, Zellar & Schottmann (1994) demonstrate their considerable skill. We report here that the positioning of the operator is the most important determinant of success, and our finding that with correct positioning a difficult procedure became quick, easy and reliable.

Fig. 1 Visualization of the vocal cords

Materials and methods

Intubations have been performed on New Zealand White rabbits weighing 2.0–2.5 kg. They were anaesthetized via the marginal ear vein with Propofol (Zeneca) to a sufficient depth to allow the mouth to be easily opened.
Oral endotracheal intubation of rabbits

The rabbit was laid prone on a table with its head close to a corner and its body extended close to one edge of the table, so operator and assistant stood facing each other with the assistant in front of the rabbit and the operator behind and to one side of the animal. The rabbit’s head was tipped back and supported at the angle of the jaw by the assistant who at the same time gently pulled the tongue out of one side of the mouth.

With the operator standing behind the rabbit a Wisconsin laryngoscope with paediatric blade Number 1 was inserted and by viewing from behind the dorsal surface of the head the vocal cords could be very well visualized (Fig 1).

A sterile endotracheal tube O.D.3.5 mm (Portex Ltd, Hythe, Kent CT21 6JL) lubricated with a water-soluble sterile lubricant (K-Y Jelly, Johnson & Johnson Ltd, Slough, UK) could easily be inserted from this position, even without the necessity of completely obtunding laryngeal reflexes. After insufflation of drugs the tube was withdrawn. Recovery was rapid and within 5 min all rabbits had regained their righting reflexes and were moving calmly about their cages. We have experienced no complications arising from this method of intubation.

Discussion

We have previously experienced considerable difficulties intubating rabbits. We understand this is a common experience. We recommend the method described as completely reliable, without trauma to the rabbits and without subsequent adverse effects.

References

Davies NL, Malinin TI (1974) Rabbit intubation and halothane anaesthesia. Laboratory Animal Science 24, 617–21
Hoge RS, Hodesson S, Snow IB (1969) Intubation technique and methoxyflurane administration in rabbits. Laboratory Animal Care 19, 593–5
Schuyt HC, Leene W (1977) An improved method of tracheal intubation in the rabbit. Laboratory Animal Science 27, 690–3
Schuyt HC, Meeder P, Leene W (1978) A bit to immobilize the endotracheal tube in the intubated rabbit. Laboratory Animal Science 28, 470–1