Separating the Lungs of Dogs without Obstructing the Right Upper Lobe Bronchus

To the Editor:—Doctors Muneyuki, Konishi, Yada, and Kinoshita have recently shown that the bronchial orifice of the right upper lobe originates above the level of the tracheal carina in the majority of dogs. This anatomical feature precludes separation of the two canine lungs with any currently commercially available human or canine double-lumen tube without obstructing the right upper lobe. These authors are to be congratulated for recognizing this technical difficulty, designing a special double-lumen tube to eliminate the difficulty, and successfully testing their double-lumen tube. This is an important advance, because I believe that few physicians conducting research in this area are aware that this problem or a solution to it exist.

I recognized this problem in previous open-chested canine experiments and devised an alternative method of separating the two lungs without obstructing the right upper lobe bronchus. A single-lumen tube is placed into the trachea and advanced until the tip of the tube is palpated, from within the chest, to be just into the left mainstem bronchus (proximal to the left upper lobe). A ligature is placed around the left mainstem bronchus and single-lumen tube, and tightly tied around both structures. A second single-lumen tube is placed high in the trachea and used to ventilate the right lung. The ligature separates the two lungs, eliminates the need for potentially obstructing balloons, eliminates the need for hand-fashioning a special double-lumen tube, and works 100% of the time.

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Reference

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