

Lung Deposition of Radio-tagged Aerosol Delivered Using the Aerogen® Solo During Different Modes of Mechanical Ventilation

Dugernier J, Reychler G, Wittebole X, et al. Aerosol delivery with two ventilation modes during mechanical ventilation: a randomized study. Ann Intensive Care. 2016;6(1):73.

Background



There is a lack of data on the pulmonary deposition of aerosolized medicines during different modes of mechanical ventilation

Objective



The aim of this study was to compare lung deposition of radio-tagged aerosol delivered using the Aerogen Solo during pressure support ventilation and volume-controlled ventilation

Materials and Methods

Design: Randomized, comparative, double-blind study

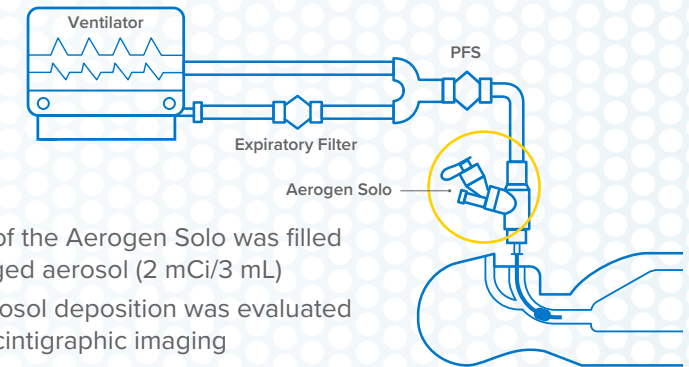
Adult patients with healthy lung function admitted to the ICU following neurological surgery

Randomisation

Pressure support ventilation
(n=10)

Volume control ventilation
(n=9)

Aerosol delivery and deposition analysis



- The reservoir of the Aerogen Solo was filled with radio-tagged aerosol (2 mCi/3 mL)
- Pulmonary aerosol deposition was evaluated using planar scintigraphic imaging
- Pulmonary deposition was measured overall, and separately in the left and right lungs

Lung deposition of aerosol delivered using the Aerogen Solo during pressure support and volume control ventilation was 10–15%

Nominal dose deposited in the lungs
(mean ± standard deviation)

PRESSURE SUPPORT VENTILATION

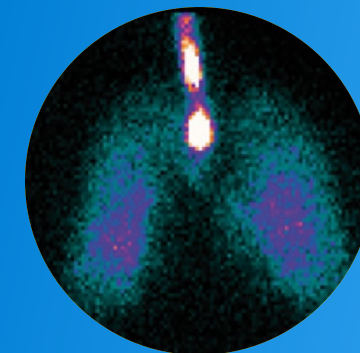
10.5%

(±3.0)

VOLUME CONTROL VENTILATION

15.1%

(±5.0)



Representative scintigraphic image of pulmonary aerosol deposition
(pressure support ventilation)

Want to know more?
Scan or click the QR code

