primary studies - published RCT

A widely available method for the assessment of aerosol delivery in cystic fibrosis.

Code: PM12493338 **Year:** 2002 **Date:** 2002 **Author:** Kastelik JA

Study design (if review, criteria of inclusion for studies)

Randomised cross-over study.

Participants

10 healthy volunteers and 6 CF patients

Interventions

Pari LC Plus (Pari Medical Ltd) nebuliser and the HaloLite Adaptive Aerosol Delivery (AAD) system (Profile Therapeutics Ltd)

Outcome measures

Nebulisation time. Dose delivered. Lung deposition. Adverse events. FEV1 and FVC.

Main results

The HaloLite AAD delivered on average 2.1 times (P=0.003) as much aerosol to the lungs compared with Pari LC Plus. Only two subjects had higher lung deposition from Pari LC Plus than HaloLite AAD system. There was marked inter-individual variation in the deposition pattern in CF patients. The aerosol deposition from HaloLite AAD had higher central distribution than that obtained with the Pari LC Plus. The overall intersubject variability of the delivered dose was 56% with Pari LC Plus and 24% with HaloLite AAD (P

Authors' conclusions

The measurement of aerosol deposition from nebulisers can be performed using a simple and widely available methodology, and may improve nebuliser selection in CF patients.

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See also

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Keywords

Inhalation OR nebulised; HaloLite; nebuliser; non pharmacological intervention - devices OR physiotherapy;