primary studies - published, non RCT

Ultrashort Echo-Time Magnetic Resonance Imaging Is a Sensitive Method for the Evaluation of Early Cystic Fibrosis Lung Disease.

Code: PM27551814 **Year:** 2016 **Date:** 2016 **Author:** Roach DJ

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

non randomised trial

Participants

Eleven CF patients (mean-age 31.8+/-5.7 months, median age 33 months, 7M/4F) imaged via CT and UTE MRI. Eleven healthy age-matched patients (mean-age 22.5+/-10.2 months, median age 23 months, 5M/6F) imaged via UTE MRI. Thirteen additional patients as a control group (mean-age 24.1+/-11.7 months, median age 24 months, 6M/7F).

Interventions

Eleven CF patients were imaged via CT and UTE MRI. Eleven healthy age-matched patients were imaged via UTE MRI. CT scans of thirteen additional patients obtained for clinical indications not affecting the heart or lungs and interpreted as normal provided a CT control group .

Outcome measures

Studies were scored by two experienced radiologists using a well-validated CF-specific scoring system for CF lung disease.

Main results

Correlations between CT and UTE MRI scores of CF patients were very strong with P-values

Authors' conclusions

UTE MRI detected structural lung disease in very young CF patients and provided imaging data that correlated well with CT. By quantifying early CF lung disease without using ionizing radiation, UTE MRI appears well suited for pediatric patients requiring longitudinal imaging for clinical care or research studies.

http://dx.doi.org/10.1513/AnnalsATS.201603-203OC

See also

Ann Am Thorac Soc. 2016 Aug 23.

Keywords

computed tomography; diagnostic procedures; non pharmacological intervention - diagn;