primary studies - published, non RCT

The impact of chest computed tomography and chest radiography on clinical management of cystic fibrosis lung disease.

Code: PM31494047 **Year:** 2020 **Date:** 2020 **Author:** Bortoluzzi CF

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

Randomized cross-over design

Participants

Patients aged 8-18â€¯years, randomly selected from two CF centres in The Netherlands.

Interventions

36 web based clinical vignettes (i.e. case simulations) were designed using clinical data from patients. In a randomized cross-over design, clinicians assessed eight vignettes and suggested therapeutic/diagnostic management on two occasions, with a ten-week interval. Radiological information (CT or CR) was included at only one of the two assessments, in random order.

Outcome measures

Any differences in management could be attributed to information from CT or CR, and were compared by McNemar analysis.

Main results

44 European and Australian clinicians completed a total of 143 CT vignette pairs and 167 CR vignette pairs. CT was associated with a significant increase in antifungal treatment (Risk Ratio (RR) 2.8 (1.3-6.0, pâ€¯=â€¯.02)), bronchoscopies (RR 1.6 (1.1-2.5, pâ€¯=â€¯.04)), mycobacterial cultures (RR 1.3 (1.0-1.5, pâ€¯=â€¯.02)), and 'need for hospitalization' (i.e. intravenous antibiotics and/or bronchoscopy) (RR 1.4 (1.0-1.9, pâ€¯=â€¯.03)). CR led to a significant increase in inhaled antibiotics only (RR 1.3 (1.0-1.6, pâ€¯=â€¯.04)).

Authors' conclusions

CT but not CR, at routine biennial follow-up was associated with several changes in treatment and/or diagnostic testing, including the need for hospitalization.

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See also

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Keywords

computed tomography; non pharmacological intervention - diagn; diagnostic procedures; Respiratory System Agents;