primary studies - published, non RCT

Early Respiratory Bacterial Detection and Anti-Staphylococcal Antibiotic Prophylaxis in Young Children with Cystic Fibrosis.

Code: PM29035090 **Year:** 2017 **Date:** 2017 **Author:** Hurley MN

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

Longitudinal observational study

Participants

Children with cystic fibrosis who were recruited from birth (or their first registry entry in the period) and followed until the age of 4 years (1500 days) using UK CF Trust and US CF Foundation Registries, 2000-2009. Children were excluded if they had a culture positive for S. aureus or P. aeruginosa, or were receiving inhaled antibiotics, at first encounter.

Interventions

Anti-staphylococcal antibiotic prophylaxis (recommended in the UK, but recommended against in the US). Flucloxacillin vs no prophylaxis. Covariates: sex, age at registry entry, Dornase alfa use, genotype and center size.

Outcome measures

Risk of Staphylococcus aureus acquisition, risk of Pseudomonas aeruginosa acquisition. Time to first S.aureus and P. aeruginosa detection in the UK/US cohorts were compared using a Cox proportional hazards model. A UK-based analysis compared the same for those receiving flucloxacillin with those who received no prophylaxis.

Main results

The primary analysis consisted 1074 UK and 3677 US children. The risk of first detection was greater in US compared to UK for S. aureus (hazard ratio (HR) 5.79; 95% CI: 4.85, 6.90; p

Authors' conclusions

Risk of first detection of S. aureus and P. aeruginosa is greater in US compared to UK. In the UK, the risk of first P. aeruginosa detection is increased among those receiving flucloxacillin compared to those who received no prophylaxis. These observational findings should be explored in a randomized controlled trial.

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See also

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Keywords

Anti-Bacterial Agents; Bacterial Infections; Continuous; Drug Administration Schedule; flucloxacillin; Hospitalization; Hospital care; Infection; pharmacological_intervention; Respiratory Tract Diseases; Respiratory Tract Infections; Staphylococcus aureus;