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An Early Health Economic Analysis of the Potential Cost Effectiveness of an Adherence Intervention to Improve Outcomes for Patients with Cystic Fibrosis.

Code: PM28337719

Year: 2017

Date: 2009 - updated: 7 FEB 2014

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

All randomised and quasi-randomised trials (published or unpublished) comparing any influenza vaccine with a placebo or with another type of influenza vaccine.

List of included studies (4)

Adlard 1987; Gruber 1994; King 1987; Schaad 2000

Participants

Children and adults with confirmed diagnosis of CF by sweat test or molecular genetic testing, or both, with all degree of disease severity.

Interventions

Intramuscular subunit vaccine; Intramuscular virosome vaccine; Intranasal live vaccine

Outcome measures

Adverse events; Adverse events with one vaccine dose; Adverse events with two vaccine doses; Death

Main results

Four studies enrolling a total of 179 participants with cystic fibrosis (143 (80%) were children aged 1 to 16 years) were included in this review. There was no study comparing a vaccine to a placebo or a whole virus vaccine to a subunit or split virus vaccine. Two studies compared an intranasal applied live vaccine to an intramuscular inactivated vaccine and the other two studies compared a split virus to a subunit vaccine and a virosome to a subunit vaccine (all intramuscular). The incidence of all reported adverse events was high depending on the type of influenza vaccine. The total adverse event rate ranged from 48 out of 201 participants (24%) for the intranasal live vaccine to 13 out of 30 participants (43%) for the split virus vaccine. With the limitation of a statistical low power there was no significant difference between the study vaccinations. None of the events were severe. All study influenza vaccinations generated a satisfactory serological antibody response. No study reported other clinically important benefits.

Authors' conclusions

There is currently no evidence from randomised studies that influenza vaccine given to people with cystic fibrosis is of benefit to them. There remains a need for a well-constructed clinical study, that assesses the effectiveness of influenza vaccination on important clinical outcome measures.

<http://dx.doi.org/10.1007/s40273-017-0500-x>

See also

Pharmacoeconomics. 2017 Mar 23. doi: 10.1007/s40273-017-0500-x.

Keywords

Adolescent; Child; Immunization; Infant; Infection; Influenza A virus; pharmacological_intervention; prevention; Respiratory Tract Diseases; Respiratory Tract Infections; Virus; Intramuscular; Intranasal;