Background information & Introduction

This is a first Indian study to evaluate the efficacy of flu vaccine in Indian pediatric population. Influenza has become of considerable concern in last few months due to pandemic swine flu. Indian Academy of Pediatrics (IAP) has recommended the influenza vaccine for high risk children above 6 months of age only.1 There is little awareness and knowledge of Influenza vaccine among Indian parents. Many parents are reluctant to use Influenza vaccine in their children as it is new, relatively expensive and is not included in government national immunization program. The influenza vaccine is in Indian market since 2004. Many children are given this influenza vaccine every year by private medical practitioners. However, till the date there is no Indian study which gives information about effectiveness of the vaccine in Indian children. Cochrane reviews are good source of information on studies done on Influenza vaccine but none of the Influenza vaccine related Cochrane review meta analysis are generated from India.2

Objective

To evaluate the clinical effectiveness of the 2009-2010 seasonal influenza vaccine in preventing Influenza-like illness (ILI) in healthy Indian children of age 6 months to 18 years.

Methodology

A prospective observational cohort study was carried out from September, 2009 to February, 2010, at a private outpatient pediatric setting in Northern India. All the enrolled children were followed monthly for a period of eight months (Sep, 2009 to May, 2010) through telephonic interview of their parents for development of ILI. The visits to physician for any acute respiratory tract infection (ARI) were also recorded. ILI was defined as per ICD-10. Children having 1 shot and 2 shots of influenza vaccine were defined as partially vaccinated and fully vaccinated, respectively. Multiple logistic regression was used to determine the association between vaccination status and ILI.

Results

A total of 294 children in two arms i.e. vaccinated and unvaccinated cohort (N=153 & 141, respectively) were enrolled in the study. There was a statistically significant reduction in ILI [OR 0.57 (0.33-0.99), P < 0.05] and visits to physician for ARI [OR 0.42 (0.22-0.79), P < 0.05] among fully vaccinated children (n=101) when compared to unvaccinated children (n=141).

Conclusions

Seasonal influenza vaccine is effective in reducing the ILI and visits to physician for ARI among fully vaccinated Indian children. Partial vaccination does not offer any protection against ILI and visits to physician in Indian children. This is the first report on the clinical effectiveness of seasonal influenza vaccine in healthy Indian children.

References


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