Objective
Otitis-prone children can present some distinctive clinical patterns, and although a number of known risk factors for recurrent acute otitis media (RAOM) are known no dedicated epidemiological models have been developed to explain clinical heterogeneity.

Methods
A preliminary retrospective pilot study was planned to evaluate the possible effect of allergic disease in the development of different disease phenotypes in otitis-prone children aged 3-10 years, particularly the absence (type 1 phenotypic pattern of disease, T1PPD), or presence (type 2 PPD, T2PPD) of episodes of otitis media with effusion between acute infections.

Results
Analysis was based on the data contained in 153 charts (55.6% males, mean age of 59.4 ± 16.4 months). 75.8% of children had a T1PPD and 24.2% a T2PPD. Atopy or allergy were documented in respectively 47.7% and 41.3% of children. The prevalence of atopy or allergy was significantly higher in the children with a T2PPD (atopy: 73.0% vs 39.5%, p<0.001; allergy: 60.0% vs 36.1%, p=0.049), who also more frequently showed adenoidal hypertrophy (p=0.016), chronic adenoiditis (p=0.007), conductive hearing loss (p=0.004), and impaired tympanometry (p<0.001).

Conclusions
These data suggest that children with a T2PPD are clinically different from children with T1PPD, as they have a more complex clinical presentation that includes not only adenoidal disease and audiological impairment, but also an underlying allergy or atopy. The possibility that the factors mentioned above may be differently involved in the heterogeneous clinical manifestations occurring in otitis-prone children needs to be further investigated in ad hoc epidemiological studies.