Background and aims Acute otitis media (AOM) is the most common infection in childhood, resulting from both anatomic and immunologic specificities of this age group. Recurrent AOM has been defined as one of the warning signs for primary immunodeficiencies (PID). In this study we evaluated the strength of recurrent AOM as clinical predictor of PID.

Methods Retrospective study (August 2010–December 2013) which included all patients referred to PID appointment because of recurrent AOM (≥8 AOM episodes/year). Syndromic patients or those presenting with another warning sign for PID were excluded. Clinical, demographic and laboratory results were analyzed and statistical analysis was made using SPSS 20.

Results Seventy-five patients were included (median age 37,8 months; 62,7% male gender), corresponding to 15% of all first appointments. Other comorbidities were present in 20% of the patients and 17% had Otitis surgery prior to PID referral. In most patients, the immunologic screening consisted on the evaluation of humoral function, but in selected cases other studies were performed (namely complement and lymphocyte immunophenotyping).

A PID was identified in 12 children (16,0%) and the majority of these patients had other distinctive feature (personal or familiar antecedent of infection or auto-immunity, 66,7%, p < 0.05). Nine children (12,0%) underwent prophylactic citorimoxazole. The average length of follow-up was 11,2 months.

Conclusion Despite being a very frequent cause of immunologic screening, in this study recurrent AOM was not found to be a good predictor of underlying PID, unless the patients presents other significant personal or family history.