Background and aims The smoking parent is considered a risk factor for severity of acute bronchiolitis (AB). We aimed to evaluate the relationship between parental history of smoking and length of stay of infants hospitalised for AB.

Methods Prospective descriptive study including all infants admitted for moderately bronchiolitis, between 2011 and 2013. They were grouped in smoking parent or not. Severe bronchiolitis and patients with serious risk factors were excluded. The primary outcome was length of stay (LOS). The following variables were recorded: age, sex, atopic dermatitis, parental atopy, number of siblings, breastfeeding, RSV, treatment received, need for PICU, mortality and clinical score at admission.

Results Among the 137 enrolled infants, 56.2% had no smoking parent. There were no statistically significant differences (p > 0.05) between the two groups in the following variables: median age (40 vs 59 days), male gender (48% vs 53%), atopic dermatitis (6.7% vs 15.6%), breastfeeding (59.7% vs 53.3%), number of siblings (0.66 vs 0.63) day care attendance (16.9% vs. 6.7%), severity score (5.35 vs 5.28), percentage of positive RSV (67% vs 65%) and PICU admission (7.8% vs 5%). There were statistically significant differences in parental atopy (p = 0.04). The median LOS in the smoking parent group was 3.33 days compared with 3.11 days in the other group (p = 0.239).

Conclusions There are no significant differences in mean hospital stay among patients with moderate AB with or without a history of smoking parent. In our series smoking parent is not a severity risk factor for AB.