Title: Evolution of asthma during pregnancy: Difference based on the sex of the newborn

Body: Introduction: It is postulated that the course of asthma during pregnancy differs based on the sex of the fetus although this is not demonstrated. Methods: This was a multicentre, prospective study of pregnant who were follow-up every three months. Nitric oxide (FENO), pulmonary function, asthma control (ACT), home peak-flow measurements (14 days) and healthcare resources consumption were registered (outpatient visits, emergency room visits, hospitalizations). Delivery data and possible complications were obtained, assessing differences depending on the sex of the newborn. Results: A total of 92 asthmatic pregnant women were enrolled (48 female fetus and 44 male). At each trimester, pulmonary function, FENO, ACT, morning and evening peak-flow and asthma healthcare resources consumption, there were no significant differences between fetal sex. In addition 47 deliveries were through cesarean (10 females; 17 males; \( p = 0.050 \)). No differences between sex were reported in the 8 complications reports (4 low weight, 1fetal death, 3 respiratory complications of the newborn). Conclusion: Our findings show that there are no differences in the course of asthma during pregnancy related to fetus sex. It is not confirmed that the pregnancy of a male fetus produced any improvement in the asthma of the mother. This study was funded by FNV 2009 and Pfizer SLU.