

## EFFECT OF A THICKENED FORMULA SPECIFICALLY DESIGNED FOR PRETERM INFANTS ON APNOEAS INDUCED BY GASTROESOPHAGEAL REFLUX

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**Background and aims:** Apnoea of prematurity (AOP) is a frequent clinical issue in the management of preterm infants; its relationship with gastroesophageal reflux (GER) is widely debated. In a previous study we highlighted an increase of the frequency of AOP after GER (GER-induced AOP). The aim of the present study is to evaluate the effect of an amylopectin-thickened formula specifically designed for preterm infants on AOP and on GER-induced AOP.

**Materials and methods:** Eighteen preterm infants (gestational age < 32 weeks) with recurrent apnoeas underwent a six-hours simultaneous and synchronized recording of polysomnography and pH-impedance monitoring (pH-MII). Each oral/nasal flow cessation lasting at least 5 seconds was considered as apnoea. Apnoeas detected within 30 seconds after the onset of GER were defined as GER-induced. Each patient received 2 meals, one of preterm formula (PF) and the other of a thickened formula specifically designed to satisfy preterm infants' nutritional needs (TPF). AOP and GER-induced AOP detected after PF and TPF meals were compared.

**Results:** One-hundred-twenty-seven apnoeas were recorded after TPF (mean 5/patient, range 0-21), whereas 118 apnoeas were recorded after PF (mean 4.5, range 0-27). A lower number of GER-induced AOP was detected after TPF meals (3 vs 7 after PF meals).

**Conclusions:** Preliminary results of the present study show that a thickened formula specifically designed for preterm infants is ineffective in reducing the total number of AOP, while it could be beneficial on GER-induced AOP. Further data from a larger population are needed to confirm these results.