

POSTNATAL GROWTH IN PRETERM INFANTS FED PROBIOTICS : PREMAPRO STUDY

S. Hays¹, A. Jacquot², H. Gauthier³, E. Jumas-Bilak⁴, A. Beissel³, O. Pidoux², E. Lachambre⁵, F. Rochat⁶, G. Cambonie², O. Claris³, **J.-C. Picaud¹**, PREMAPRO Study Group

¹Neonatalogie, Hopital de La Croix Rousse, Lyon, ²Neonatalogie, Hopital Arnaud de Villeneuve, Montpellier, ³Neonatalogie, Hopital Femme-Mere-Enfant, Bron, ⁴Bacteriologie EA 3755 UMI, Faculté de Pharmacie, Montpellier, ⁵Nestle France, Noisiel, France, ⁶Nestec, Lausanne, Switzerland

Background: Significant reduction of necrotizing enterocolitis (NEC) and mortality rate has been recently reported in preterm infants supplemented with oral probiotics.

Aim: To evaluate postnatal growth in preterm infants supplemented with different probiotic preparations and the occurrence of late onset sepsis.

Population and methods: Prospective, randomized, double-blind, controlled study performed in 3 tertiary care neonatal units in France (Lyon, Montpellier). Preterm infants (26-31wks, 700-1600g) were randomly designed to receive daily supplementation with placebo (C) or probiotics (P) : bifidobacterium lactis (P1), bifidobacterium longum (P2) or both (P3) during 4-6 weeks. The number of subjects needed to show a 200g difference in body weight at the end of supplementation period, with a power of 90%, was 46 per group. Aerobic and anaerobic blood cultures were performed when a late onset sepsis was suspected.

Results: 197 preterm infants (GA:29.1±14 wks, BW:1173±210g) were included: Placebo (n=52), Probiotics (n=142) from the first week of life (DOL=6.6±1.5d). At the end of the supplementation period, there was no difference in body weight (group C=1906±23g, group P=1875±14g, p=0.25) length and head circumference. The incidence of NEC was very low and similar between the 2 groups (NS). The incidence of late onset sepsis was similar between the 2 groups. None of these sepsis was related to a bifidobacteria. At term corrected age, there was no difference in anthropometric measurements and body composition analysis.

Conclusion: Preterm infants supplemented with bifidobacteria did not exhibit a better postnatal growth. No adverse effect was related to probiotics.