

Early Treatment of Patent Ductus Arteriosus (PDA) with Ibuprofen – Short and Long Term Outcomes

The Baby-OSCAR trial is the largest study to investigate the early treatment of a large PDA with ibuprofen in extremely preterm infants

Early ibuprofen treatment for a large PDA in extremely preterm infants **did not reduce death, improve neurodevelopmental or respiratory outcomes in the short or long term.** These findings provide important evidence to guide clinical decision-making in neonatal care.

Short Term Outcomes

Composite Primary Outcome:

Death or Moderate or Severe
Bronchopulmonary Dysplasia at 36 weeks post-menstrual age

69.2% (220/318)

Ibuprofen

63.5% (202/318)

Placebo

Not statistically significant

Early ibuprofen treatment **did not reduce death or moderate/severe bronchopulmonary dysplasia** compared with a placebo by 36 weeks post-menstrual age.

Individual Outcomes

Death by 36 weeks post-menstrual age

13.6% (44/323)

Ibuprofen

10.3% (33/321)

Placebo

Moderate or Severe

Bronchopulmonary Dysplasia at 36 weeks post-menstrual age

64.2% (176/274)

Ibuprofen

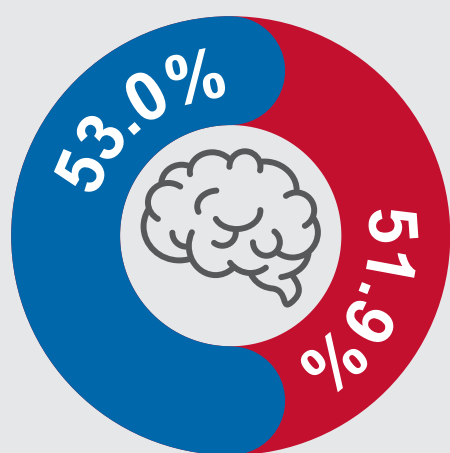
59.3% (169/285)

Placebo

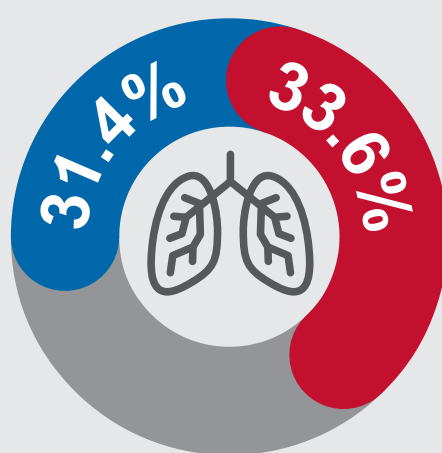
Long Term Outcomes

■ Ibuprofen group

■ Placebo group



Survival without moderate to severe
neurodevelopmental impairment



Survival without
respiratory morbidity



Median duration of
oxygen support

No significant differences between groups

There was **no difference in survival, neurodevelopmental or respiratory outcomes** at 24 months of age.

Between **2015 and 2020**, a randomised, placebo-controlled, double-masked trial was conducted in **32+ UK hospitals** involving **653 preterm infants** (23⁺⁰ - 28⁺⁶ weeks) with a PDA ≥1.5 mm and pulsatile flow, within 72 hours of birth. **326 babies received ibuprofen** (10 mg/kg (loading dose) + 5 mg/kg (two doses, 24 hours apart) and **327 babies received a placebo** (saltwater solution).