

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

Individual Outcomes

Death by 36 weeks post-menstrual age

13.6% (44/323) Ibuprofen

10.3% (33/321) Placebo

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

Moderate or Severe

Bronchopulmonary Dysplasia at 36 weeks post-menstrual age

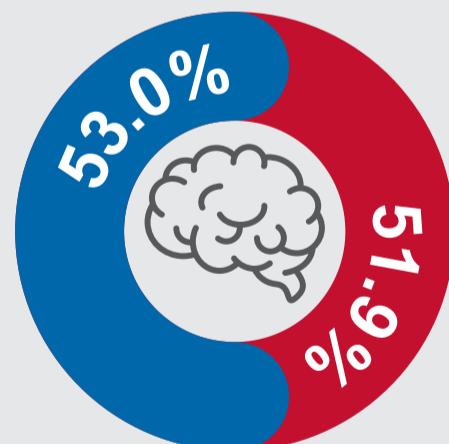
64.2% (176/274) Ibuprofen

59.3% (169/285) Placebo

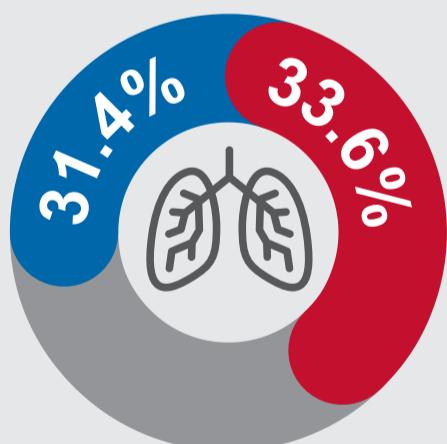
Long Term Outcomes

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).