

CLOSURE OF PATENT DUCTUS ARTERIOSUS WITH ORAL IBUPROFEN SUSPENSION

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Patent ductus arteriosus(PDA) is a common problem among premature infants. Recently, intravenous ibuprofen has been shown to be as effective as intravenous indomethacin in preterm infants. There are no published studies on oral ibuprofen for PDA. In this prospective study, we aimed to evaluate the efficacy and safety of oral ibuprofen for the early treatment of PDA in preterm infants. Methods: Twenty-two preterm newborns with a gestational age of 27.5 ± 1.75 (23.9-31) weeks, weighing 979 ± 266 (380-1500) grams were prospectively studied. All suffered from respiratory distress syndrome and PDA as confirmed by echocardiography. They were treated with enteral ibuprofen suspension, 10 mg/kilogram body weight for the first dose, followed at 24-hour intervals by a further two doses of 5 mg/kg per dose, if needed, starting on the second day of life. Echocardiography was performed 24 hours after each dose. Brain ultrasonography before and after each ibuprofen dose was performed in every child. The rate of ductal closure, the need for additional treatment, side effects, complications, and the infants' clinical courses were recorded.

Results: Ductal closure occurred in all newborns except for one (95.5%) in whom only minor ductal shunting remained without clinical significance, as compared to 70% in the intravenous study ($p=0.015$). No surgical treatment was needed in our patients. Serum creatinine was similar before and after ibuprofen treatment.

Conclusions: Our data may indicate that oral ibuprofen suspension is effective for closure of patent ductus arteriosus in premature infants. However, larger comparative studies are needed to investigate its efficacy and safety.

