Comparison of intravenous pracetamol versus ibuprofen for the treatment of patent ductus arteriosus in preterm infants

Abstract

Background and Objective: PDA is a common cause of morbidity and mortality among premature infants that affects more than 40% of them. PDA treatment includes medical and surgical treatment. Most drugs used to block PDA are cyclooxygenase inhibitors (ibuprofen and indomethacin) that inhibit the conversion of arachidonic acid to prostaglandins. Paracetamol (acetaminophen) acts by directly inhibiting prostaglandin synthase activity and unlike ibuprofen in the peroxidase portion of the enzyme, the paracetamol inhibitory activity is facilitated by local reduction of hydroperoxide accumulation. The role of paracetamol as an alternative therapy in PDA ligation has been considered in recent years due to the potential side effects of cyclooxygenase inhibitors. Buali and Alavi Hospital in Ardebil.

Methods: Patients in the first group were treated with intravenous paracetamol at a dose of 15mg / kg every 6 hours for three days and the second group was treated with intravenous ibuprofen at a daily dose of 10mg / kg daily and 5mg / kg for the second and third days. At the end of the treatment period (day 3), they underwent echocardiography again. If the echocardiographic findings indicated no closure of the arterial duct, patients were treated with the aforementioned drug for another period and rechecked at the end of the third day, and at each stage required information was collected.

Results: Arterial duct closure in paracetamol group was 96.7% and in ibuprofen group was 100%. The effects of both paracetamol and ibuprofen were similar in terms of renal parameters but in terms of effects on liver parameters. The effect of paracetamol on all liver parameters except AST was significant, but ibuprofen was able to affect only bilirubin among liver parameters and had no significant effect on both AST and ALT parameters.

Conclusion:. Both paracetamol and ibuprofen are effective in treating PDA

Keywords: Ibuprofen, paracetamol, PDA, liver markers, renal markers