

Efficacy of azithromycin for prevention of bronchopulmonary dysplasia (BPD)

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Aim: Bronchopulmonary dysplasia (BPD) remains one of the most serious and challenging complications in premature infants. This study was conducted to evaluate the efficacy of azithromycin in the prevention of BPD in very low birth weight preterm infants

Materials and methods: Preterm neonates with birth weight less than 1500 g were enrolled in a prospective randomized controlled clinical trial. One hundred eight neonates were randomly allocated to the intervention group (n = 56) or control group (n = 52). The intervention group received oral azithromycin 10 mg/kg for 1 week followed by 5 mg/kg for another week. The outcome measures were development of BPD at 28 days of birth and 36 weeks postmenstrual age (PMA).

Results: The mean gestational age of the studied patients was 29.2 ± 3.6 weeks and their birth weight was 1173.9 ± 261 g. There was no significant difference in participants' sex distribution or their gestational age between the 2 groups. Twenty-one (43%) of the 52 patients in the control group met the definition of BPD at 28 days while 14 (25%) did in the azithromycin group ($P = 0.04$). Twelve patients were oxygen dependent (moderate to severe BPD) at 36 weeks PMA; 9 of them were from the control group ($P = 0.04$).

Conclusion: Our study suggests that azithromycin is effective in reducing the incidence of BPD in very low birth weight infants. More studies are needed with large numbers of patients before recommending routine use of this relatively safe drug for prevention of BPD.

Key words: Bronchopulmonary dysplasia, very low birth weight infants, prematurity, azithromycin, prevention

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