Efficacy of Oral Bosentan and Sildenafil Therapy for Pulmonary Hypertension with Chronic Lung Disease

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Abstract: Oral sildenafil therapy is effective in preterm infants with pulmonary hypertension (PH) secondary to chronic lung disease (CLD). This study reports the use of oral sildenafil and bosentan therapy in preterm infants for elevated PH secondary to CLD. A newborn male was delivered at 26 weeks 5 days gestation. He weighed 431 g. He was intubated at birth, followed by mechanical ventilation support. He could be withdrawn from mechanical ventilation at 3 months after birth. He was treated with oxygen via a nasal cannula for severe CLD during long-term hospitalization. He developed elevated systemic PH, due to a respiratory viral infection at 7 months old. He was forced to resume mechanical ventilation support. NO inhalation, and oral sildenafil (1 mg/kg/day) therapy was administered. The PH was dramatically improved. He was withdrawn from mechanical ventilation after 9 days, He was discharged from the NICU with Home Oxygen Therapy at 10 months of age. He developed a elevated PH at 12 months of age, due to an ophthalmology examination, and was immediately hospitalized in the pediatric ward. Sildenafil was increased to 6 mg/kg/day, but it did not work. He was forced to resume mechanical ventilation support three times. Oral bosentan (3 mg/kg/day) therapy was added to the sildenafil. His PH was improved, and he was withdrawn from mechanical ventilation after 6 days. he was discharged at 13 months of age.

Key words: **Extremely-low-birth-weight infant, SGA (Small for gestational age), Pulmonary hypoplasia, PH crisis**