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Inhaled Nitric Oxide Therapy for Newborns – A Small Romanian Experience

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Abstract

Objective. Acute respiratory failure is the most common problem seen in term and near term admitted to medical neonatal intensive care units. According to the current guidelines, management of infants with respiratory failure includes administration of high oxygen concentration, high frequency ventilation, the induction of alkalosis, neuromuscular blockade, as well as INO therapy. This is now considered a recognized practice. The INO was never used in NICUs in Romania.

Design . Case report (three cases) and review of the literature.

Setting. Neonatal intensive care unit, clinical hospital.

Patients. Three neonates (two at term with meconium aspiration, and one near term (36 weeks of GA) with Respiratory Distress Syndrome and Persistent Pulmonary Hypertension were treated with INO.

Intervention. Nitric Oxide was administrated into the ventilator circuit at starting dose of 20ppm. Doses above 20ppm are not indicated. We took in consideration doses above 20 ppm only general response was not obtained at 20ppm doses.

Measurements and results. Blood gases, methemoglobin levels, NO₂ levels, brain scans, and coagulation screen.

Conclusion. For all three cases with severe hypoxemic respiratory failure, using of NO was a success. Inhaled NO is a selective vasodilator for the constricted pulmonary vascular bed and improves ventilation perfusion matching in respiratory failure.

Keywords. Persistent pulmonary hypertension-Neonate-NO.