Introduction

Transport of newborns is associated with increased morbidity compared to those that are not required to be transported interfacially. Morbidity increases with the duration of transport (1,2). Respiratory Distress Syndrome (RDS) and neonatal sepsis are common problems with increasing gestational age. Sufficient has been established as a therapy for RDS as well as for secondary causes of surfactant deficiency, such as meconium aspiration (3). Research suggests the use of surfactant as an early intervention to prevent RDS (4). However research that does not require interfacility transport can impact the outcomes of the NICU stay (1,2,3,4).

The study was a retrospective chart review of 35 newborns born at League City and Clear Lake nurseries from June to October 2010 and transferred to the UTMB NICU. Three patients were excluded from the analysis. These patients were transferred after neonatal seizures and/or neonatal insulin-dependent diabetes occurred during their NICU stay. The groups were divided into survivors and non-survivors. Survivors were defined as newborns that occurred without a Dialysis (DMM) and hypoglycemia being noted during the NICU stay. Neonates that met the criteria were divided into RDS, TTN, and PPHN groups. These groups were also compared with length of stay and length of respiratory support. Data analysis was done with independent t tests.

Results

Neonate pairs were created by comparing gestational age and neonatal complications. 15 different conditions were used to group and group patients. Two neonate pairs were created for patients born at UTMB. Neonate pairs of newborns that occurred without a Dialysis (DMM) and hypoglycemia being noted during the NICU stay. Neonates that met the criteria were divided into RDS, TTN, and PPHN groups. These groups were also compared with length of stay and length of respiratory support. Data analysis was done with independent t tests.

Figure 1. Comparing Neonatal Diagnosis Between Groups

For the TTN pairs, the length of stay was one day longer for the transfer group. The transfer and control groups had similar diagnosis/comorbidities. Respiratory depression was more likely to be identified in the transfer group. Exercise dyspnea was more common in the control group. This is expected due to the logistics and travel time needed before transport can be done by transport team or NICU. Overall the transfer group had a shorter length of stay and respiratory support.

For the PPHN pairs, the length of stay was longer for the patients born at UTMB. For the PPHN pairs, the length of stay was longer for the patients born at UTMB. Respiratory depression was noted more commonly in the control group. For the PPHN pairs, the length of stay was longer for the patients born at UTMB. Respiratory depression was noted more commonly in the control group.

For the PPHN pairs, the length of stay was longer for the patients born at UTMB. Respiratory depression was noted more commonly in the control group. However, when the control group had similar diagnosis/comorbidities, respiratory depression was more likely to be identified in the control group. This is expected due to the logistics and travel time needed before transport can be done by transport team or NICU.

No significant difference in length of stay, length of respiratory support, or length of respiratory support after completion of respiratory therapy was observed between newborns born at UTMB.