

Evaluating the incidence, potential risk factors and time to recovery of diaphragm paralysis after cardiac surgery

The diaphragm is a sheet of muscle and tendon that serves as the main muscle of respiration, playing a vital role in the breathing process. The sole motor supply to the diaphragm is by the phrenic nerve. Damage to the phrenic nerve can cause diaphragm muscle dysfunction which can result in diaphragm paralysis.

This study will help assess the challenges and successes of treatment for this subpopulation of pediatric patients. Evaluating and identifying the incidence and potential predictors of recovery in patients with diaphragm paralysis will help clinical decision making in the treatment and management of a diaphragmatic paralysis that could potentially improve patient outcomes.

- Specific Aim 1: Determine the incidence of diaphragm paralysis due to phrenic nerve injury after cardiac surgery.**
- Specific Aim 2: Determine patient characteristics and clinical predictors of diaphragm paralysis after cardiac surgery.**
- Specific Aim 3: Assess differences in time to recovery in patients who undergo diaphragm plication versus those patients who do not receive plication.**