UNIVERSITY OF TORONTO LUNG TRANSPLANT PROGRAM

DCD LUNG RETRIEVAL OPERATIVE NOTE

Hospital: _____ Date: _____

Patient Name: _____ Medical Record Number: _____

Surgeons: _____

As per routine, the donor is given 300u/kg of heparin in the ICU. After the withdraw of life sustaining therapy, the ICU team witnesses the cessation of ventilation and circulation for a pre-determined time period. After this pre-determined time, the donor is transferred to the OR where an airway was re-established and a diagnostic bronchoscopy was preformed. Only after bronchoscopy is accomplished and no signs of aspiration are observed, ventilation is started. The donor is maintained on a ventilator with 50% FiO2 through until the lungs are removed. The organ donor's chest and abdomen were entered through a midline incision to expose the intra-abdominal and intrathoracic organs. A sternal retractor was inserted and opened to expose the anterior pericardium and medial surface of the pleural spaces bilaterally. A vertical pericardiotomy was made to expose the underlying heart. Attachments between the main pulmonary artery and ascending aorta were divided to expose and properly separate these great vessels. A 5-0 purse string suture is placed in the main pulmonary artery just proximal to the bifurcation to the left and right main pulmonary branches. The pulmonary arterial cannula is then inserted in the main pulmonary artery and secured with the purse string.

With all transplant surgeons appropriately ready to perfuse their respective organs, a direct injection of 500 micrograms of prostaglandin PGE 1 into the main pulmonary artery was made. The left atrial appendage was transected in order to vent the lungs. The inferior vena cava at the level of the diaphragmatic surface is transected to vent the liver.

Pulmonary flush was then instituted. Through the entire pulmonary flush process, mechanical ventilation was maintained. Cold solution and crushed ice were places in the pericardial and pleural spaces bilaterally to facilitate hypothermia of the lung bloc.
Once the flush solutions had passed through the lung completely, we proceeded to remove the lung bloc.

This was done by elevating the heart out of the pericardial sac and transecting the left atrium just proximal to the confluence with the right and left pulmonary veins. Once the left atrium was completely detached posteriorly, the heart was dropped back into the pericardial sac and the main pulmonary artery was transected just proximal to the bifurcation. The aortic route was dissected and transected at the level of the takeoff of the great vessels with posterior attachments of the aortic route and posterior pericardium transected working backwards into the pericardial sac. The superior vena cava was then transected within the pericardium and the heart removed from the donor pericardial sac.

The pericardium was transected at the diaphragm to enter retropericardial space. Blunt dissection was carried forward along the line of the esophagus and aorta posteriorly up to the level of the trachea just above the carina. The inferior pulmonary ligaments were then transected bilaterally to free up the entire lung bloc inferiorly.

The ascending aorta was reflected laterally and the posterior surface of the pericardium was incised between the superior vena cava and aorta to expose the trachea. Sharp and blunt dissection was utilized to encircle the trachea 3 cm proximal to the level of the main carina. The trachea was then transected with a bronchial stapler proximal to the main carina with the lungs having been previously manually inflated to an inflation pressure of 30 mm Hg. Tissue in the right and left paratracheal spaces superior were transected in order to free up the lung bloc completely and it was removed from the donor chest cavity.

The donor lung bloc was then placed in cold Perfadex solution within sterile containers for transport.

ADDITIONAL NOTES

Aberrant Vessels: _____

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Organs Retrieved: _____

_____

Other: _____

_____

Signature: _____