Trillium Gift of Life Network

PATIENT INFORMATION

Donation after Death Determination by Neurologic Criteria Order Set (Adult)

Administrative

☒ Dr._____ to consult/assume MRP

Allergies or hypersensitivities? ☐ No ☐ Yes: (list) _____

☒ MRSA screening and clinical management protocol

Monitoring

☒ Weight: _____ kg ☐ **actual** ☐ **estimate**

☒ Height: _____ cm ☐ **actual** ☐ **estimate**

☒ Continuous cardiac/SpO_2 monitoring

☒ Heart Rate, respiratory rate, blood pressure (arterial where possible) q1h and PRN

☒ Intake and output q1h

☒ Core temperature (esophageal, rectal, bladder, central venous or arterial catheter) q4h and PRN

☐ _____

Tubes/Lines

Naso/Orogastric Tube

☒ If not using for nutritional support, Nasogastric tube or Orogastric tube to straight drainage

Urinary Catheter

☒ Urinary catheter to urometer

Interventions

☐ For all potential kidney donors, maintain core temperature between 34.0 and 35.0 degrees Celsius (stop if kidney donation excluded by Ontario Health [TGLN])

☐ If kidney donation excluded by Ontario Health (TGLN) – warming blanket to maintain core temperature between 35.5 degrees Celsius and 37.0 degrees Celsius

☒ Apply Lacri-Lube® or alternative ophthalmic lubricant to both eyes q2-4h

☒ Turn patient q2h

☒ Head of bed elevated at 35 – 45 degrees (as tolerated)

Laboratory Investigations

Initial Investigations

☒ Blood for Serology and Human Leukocyte Antigen (consult with Ontario Health (Trillium Gift of Life Network) [TGLN])

- Ontario Health (TGLN) will provide tubes and arrange specimen transport
- Draw prior to fluid bolus and/or transfusion if possible

Blood Bank

☒ Group+Screen

- If blood group A or AB subtyping must be requested (consult with Ontario Health [TGLN])

☒ **Initial labs (as below) to be done q6h and PRN**

Hematology and Coagulation

☒ CBC ☒ INR

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Laboratory Investigations Continued….

Chemistry

☒ Electrolytes ☒ Albumin ☒ Bilirubin (total and direct), ALT, AST, ALP, LDH, GGT, Lipase
☒ Creatinine ☒ Lactate
☒ Glucose ☒ Magnesium, Calcium, Phosphate
☐ _____

Toxicology

Serum and urine toxicology screen for all patients except if possibility of overdose ruled out by MD or previously done

☐ Serum toxicology screen (if indicated by admission history or previous results)
☐ Urine toxicology screen

Supplemental Laboratory Investigations

☒ Activated Partial Thromboplastin Time (aPTT) **NOW** and PRN
☒ Protein (Total) **NOW** and PRN
☒ Amylase **NOW** and PRN
☒ Hemoglobin A1C **NOW**
☒ Capillary glucose monitoring PRN and as per hospital policy/procedure
☒ Blood Urea Nitrogen **NOW** and PRN
☒ Urinalysis **NOW** and q24h
☒ If patient known to have Type 1 or Type 2 diabetes-urine albumin to creatinine ratio **NOW** and PRN

☐ If hospital is unable to perform urine albumin to creatinine ratio test AND patient known to have Type 1 or Type 2 diabetes-urine protein to creatinine ratio **NOW** and PRN

Microbiology, Virology- Blood, urine and sputum cultures must be completed within 24 hours of organ donation consent as per Health Canada requirements.

☒ Blood Culture and Sensitivity (C+S) (two different sites) **NOW** and PRN
☒ Sputum C+S **NOW** and PRN (initial sample **NOT** required **IF** BAL C&S completed)
☒ Urine C+S **NOW** and PRN (minimum of **ONE** urine culture is required by Health Canada for all potential organ donors, regardless of urinalysis results)

Additional Lab Orders

☐ _____

Hemodynamic Monitoring and Therapy Targets

Blood pressure indices:

- Heart rate greater than or equal to 60 beats/minute and less than or equal to 120 beats/minute
- Systolic blood pressure (SBP) greater than or equal to 100 mmHg and less than or equal to160 mmHg
- Mean arterial blood pressure (MAP) greater than or equal to 65 mmHg

Note: Maintain Hemoglobin greater or equal to 70 g/L

Cardiovascular Management

☐ 12-lead ECG x 1 **NOW** and PRN
☐ Insert a subclavian or jugular central line
☐ 2D echocardiogram **NOW** (see Associated Documents)
☐ Cardiac angiogram* As per direction from Ontario Health (TGLN)

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Exact dosing for each medication to be calculated and individualized

Hypotension Management (Use Mean Arterial Pressure (MAP) unless arterial monitoring unavailable or unreliable)

☒ IV Ringer's Lactate 500ml over 10 minutes PRN if SBP less than 100mmHg or MAP less than 65 mmHg

☒ Vasopressin IV infusion at 0.1 – 2.4 units/h PRN for SBP less than 100 mmHg or MAP less than 65 mmHg

☐ Norepinephrine IV infusion at 1 – 30 micrograms/minute PRN for SBP less than 100 mmHg or MAP less than 65 mmHg

☐ Epinephrine IV infusion at 1 – 20 micrograms/minute PRN for SBP les than 100 mmHg or MAP less than 65 mmHg

Hypertension Management (Use MAP unless arterial monitoring unavailable or unreliable)

Wean inotropes or vasopressors if infusing; start antihypertensives for SBP greater than 160 mmHg and/or MAP greater than 90 mmHg

☐ Hydralazine 10 – 20 mg IV q4h PRN for SBP greater than 160 mmHg and/or MAP greater than 90 mmHg

☐ Nitroglycerin IV infusion at 5 – 200 micrograms/minute PRN for SBP greater than 160 mmHg and/or MAP greater than 90 mmHg

☐ Labetalol IV infusion at 1 – 2 mg/min PRN for SBP greater than 160 mmHg and/or MAP greater than 90 mmHg (discontinue if HR less than 65)

☐ Esmolol _____micrograms/kg/min IV bolus (100 – 500 micrograms/kg IV bolus; consider reduced dose in the elderly population) followed by Esmolol 100 – 300 micrograms/kg/minute IV infusion PRN for SBP greater than 160 mmHg and/or MAP greater than 90 mmHg

Mechanical Ventilation Targets

- Tidal volume measurements: Tidal volume (V_t) 6 – 8 mL/kg
- PEEP: Positive End Expiratory Pressure 8-10 cm H_2O
- PIP: Peak Inspiratory Pressure less than or equal to 30 cm H_2O

Respiratory Management

☒ Chest x-ray (CXR) q12h and PRN (coordinate to perform post-recruitment maneuver-see below)

☐ Bronchoscopy and Bronchial Alveolar Lavage (BAL): Gram Stain and C+S x 3 (separate samples from each lung and 1 sample for Ontario Health [TGLN] COVID requirements) and PRN (see Associated Ontario Health [TGLN] Document)

☒ Routine ETT suctioning as tolerated q2h and PRN

☒ Salbutamol 8 puffs q2 – 4h PRN for wheezing

☒ Ipratropium 8 puffs q2-4h PRN for wheezing

Recruitment Maneuvers

Target to maintain normalized arterial blood gases: pH 7.35 – 7.45, $PaCO_2$ 35 – 45 mmHg, PaO_2 greater or equal to 80 mmHg, O_2 sat greater than or equal to 95%

☐ For all potential lung donors: In the following sequence, perform recruitment maneuvers and challenge arterial blood gases (ABG) q6h as tolerated. (stop if lung donation excluded by Ontario Health [TGLN], recruitment manoeuvers not tolerated or as dictated by patient status)

Perform the following recruitment maneuvers in sequence:

- Pre-oxygenate with FiO_2 of 1.0 for 10 minutes
- Sustained inflation with PEEP of 30 cm H_2O for 30 seconds
- Maintain FiO_2 of 1.0 and return to maintenance ventilatory parameters
- Draw ABG 10 minutes post inflation (while FiO_2 at 1.0)
- Return to maintenance FiO_2 once complete
- Obtain chest x-ray once completed

☐ If lung recruitments not tolerated – ABG on Fi02 1.0 q6h and PRN on and PRN

☐ If lung donation excluded by Ontario Health (TGLN) — stop lung recruitment maneuvers and continue ABG and CXR as per unit protocols

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Fluid and Electrolyte Targets

- Urine output 0.5 – 3 mL/kg/h (if urine output below 0.5 cc/hr OR urine output above 300 cc/hr consult MRP)
- Serum sodium equal to or above 130 mmol/L and equal to or below 150 mmol/L
- Normal ranges for potassium, calcium, magnesium, and phosphate
- Blood glucose 6 – 10 mmol/L

Fluid and Electrolytes

Exact dosing for each medication to be calculated and individualized

☒ Ringers Lactate IV infusion for maintenance at _____ mL/h

☒ If serum sodium above145 mmol/L evaluate for Diabetes Insipidus (see section on Diabetes Insipidus)

☒ Implement hospital standing order set for electrolyte imbalances **OR** follow below:

☐ If serum phosphate below 0.65 mmol/L, then administer sodium phosphate 15 mmol in 100 mL D5W IV as per unit protocol

☐ If corrected serum calcium below 2.0 mmol/L or ionized Ca less than 1.0 mmol/L, then administer 10% calcium gluconate 1 gram in 100 mL NaCl or D5W IV over 30 minutes (central or peripheral)

☐ If serum magnesium below 0.8 mmol/L, then administer magnesium sulphate 1 g in 50 – 100 mL NaCl or D5W IV over 30 minutes (central or peripheral)

☐ If potassium below 3.9 mmol/L and greater than 3.2 mmol/L, then administer 20 mmol potassium chloride in 50 – 100 mL NaCl or D5W via central line over 1 hour

☐ If serum potassium below 3.2 mmol/L, then administer 40 mmol potassium chloride in 100 mL NaCl or D5W via central line over 2 hours

DO NOT ADMINISTER HYDROXYETHYL STARCH e.g. VOLUVEN

Glycemic and Nutrition Management

☒ Initiate or continue nutritional support, when appropriate and possible

☒ 6 hours prior to planned OR stop enteral feeds and empty gastric residuals then clamp NG tube

☒ Initiate and titrate insulin infusion to maintain serum glucose 6-10 mmol/L

Endocrine and Metabolic Management

Exact dosing for each medication to be calculated and individualized

For all potential heart donors administer (Stop if heart donation excluded by Ontario Health [TGLN])

☐L-Thyroxine 100 micrograms IV x 1, then L-thyroxine 50 micrograms IV q12h

OR

☐L-Thyroxine 2micrograms/kilogram PO daily

☒ For all potential lung donors – methylprednisolone 15 mg/kg (maximum 1g) IV q24h (Stop if lung donation excluded by Ontario Health [TGLN])

☒ If lung donation excluded by Ontario Health (TGLN) **AND** patient requiring vasopressors then administer hydrocortisone 50 mg IV q6h

☒ Initiate or continue hospital insulin infusion order set to maintain serum glucose 6-10 mmol/L

☒ If creatinine clearance less than 60 mL/min, kidneys have NOT been ruled out for transplant and IV contrast is planned, give IV 0.9% NaCl 3 mL/kg/h for 3 hours pre-contrast then 1 mL/kg/h for 6 hours post-contrast

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Diabetes Insipidus Targets

- Titrate therapy to urine output of les than or equal to 3 mL/kg/h

Diabetes Insipidus Management

Clinical Indicators of Diabetes Insipidus

- Urine output greater than 4 mL/kg/h, and
- Rising serum sodium and/or
- Sodium greater than or equal to145 mmol/L and/or
- Rising serum osmolarity greater than or equal to 300 mosM and/or
- Decreasing urine osmolarity less than or equal to 200 mosM
- Specific Gravity less than 1.010

Diabetes Insipidus Therapy

Exact dosing for each medication to be calculated and individualized

☐ If Vasopressin initiated for diabetes insipidus, maintain a minimum dose of 0.5 units/hour to avoid polydipsia. If patient becomes hypertensive, consult with Ontario Health (TGLN) for management.

☐ DDAVP 4 micrograms IV q6h PRN

☐ If serum sodium greater than 145 mmol/L give enteral free H_2O 200 mL q4h and change maintenance IV to:

☐ 0.45% NaCl **OR** ☐ D5W

References

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