BC TRANSPLANT An agency of the Provincial Health Services Authority	**Organ Donor Management Recommended Guidelines ADULT CARDIAC DEATH (DCD)**	*Patient Addressograph*

Date: _____ Time: _____

☑ = **Always applicable** ☐ = **Check if applicable**

ADMISSION INSTRUCTIONS

☑ Move to Comfort Care Note in chart.

☑ Contact initiated with BC Transplant

☑ Consent for Organ Donation obtained

☑ Code Status: Full therapy except cardiopulmonary resuscitation

SECTION I. GUIDELINE FOR POTENTIAL DCD PATIENT UNTIL WITHDRAWAL OF LIFE SUPPORT

MONITORING:

☑ Complete patient height, weight, and abdominal girth. Record on BCT Physical Assessment Form (available on BC Transplant Website)

Height: _____ cm ☐ Actual ☐ Estimate

Weight: _____ kg ☐ Actual ☐ Estimate

Abdominal Girth: _____ cm (Measure around largest diameter)

☑ Urine output q1h (**notify MD if urine output greater than 200 mL/h**)

☑ HR, BP, Temperature q1h

☑ Arterial Pressure Monitor continuous

☑ Pulse Oximetry q1h

☑ CVP q4h (minimum)

PATIENT CARE

☑ Central venous catheter. RIJ preferred. Avoid femorals if possible

☑ 2 large bore peripheral IVs

☑ Urine catheter

☑ Maintain head of bed greater than 30 degrees

☑ Warming blanket to keep temperature at 35.5 to 37.5 °C

☑ NG/OG to low intermittent suction if feeds contraindicated or not tolerated

☑ X-ray post gastric sump insertion to confirm position

☑ Chest physiotherapy PRN

☑ Routine pulmonary toilet and repositioning

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LABORATORY INVESTIGATIONS

☑ Blood Type/Screen

☑ Goal hemoglobin greater than 70 g/L. Notify physician AND BC Transplant if less than 70 g/L

☑ Send blood for tissue typing and serology (use BC Transplant Collection Kit)

Initial Bloodwork, then q6h AND PRN:

- ☑ ABG
- ☑ Serum electrolytes, SCr, Urea, Ca, Mg, PO4, Lactate, CrCl or eGFR, CBC, glucose
- ☑ INR/PTT, AST, ALT, TBil, DBil, ALP, GGT, LDH, Total Protein
- ☑ Albumin, Amylase/Lipase, CK, Troponin (I or T)

☑ Cultures - all culture baseline then q24h

☑ Sputum gram stain and culture

☑ Blood culture x 2 via peripheral venipuncture

☑ Urine culture

☑ Culture all drain sites

☑ Urinalysis including specific gravity routine and micro baseline and Q24h

☑ Urine microalbumin/creatinine (ACR) ratio baseline and prn as requested

☑ Toxicology screen (serum/urine) as indicated

☑ MRSA and VRE screens (also screen all drain sites for MRSA) as per hospital policy

DIAGNOSTICS

☑ CXR, if not performed in previous 12 hours (and then q24h)

☐ CT of chest as requested by BC Transplant (High resolution – non-contrast)

☐ Bronchoscopy (as requested by BC Transplant)

NUTRITION

☑ Continue feeds if already initiated. Initiate unless contraindicated.

☑ If already initiated continue parenteral nutrition

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INTRAVENOUS

☑ Total fluid intake at _____mL/h (recommended 1 to 2 mL/kg/h) + previous hours urine output

Maintenance IV fluids based on sodium level:

Sodium 145 mmol/L and above	☐ D5W
Sodium 130 to 145 mmol/L	☐ D5W-NaCL 0.45%
Sodium 130 mmol/L and below	☐ NS
OR	☐ _____

RESPIRATORY

Objective: to optimize lung recruitment for individual patient

☐ Continue mechanical ventilation as per previous orders

OR

☐ Mechanical ventilation as follows:

- Mode _____
- Tidal volume 6mL/kg OR pressure limit at _____ (cm H20) as applicable
- PEEP 10 and adjust to meet patient requirements

☑ Adjust FiO2 to maintain SaO2 greater than or equal to 95% Maintain PaO2 greater than 70 mmHg with minimal effective FiO2.

☑ Maintain pH 7.35-7.45

☑ Recruitment manoeuvers: Periodic increases in PEEP from 30 to 40 cm H2O x 30 to 40 seconds q2h, and after all circuit disconnects and suctioning.

☑ O2 challenge: 100% FiO2 with PEEP 10 (do not reduce PEEP if at a higher level) initial and q6h PRN as requested by BCT.

MEDICATIONS

Hemodynamic Monitoring and Therapy:

Goals of Therapy (*Notify physician if outside of parameters*)

- HR 60 to 120 beats/min
- CVP 6 to10 mmHg
- MAP greater than 70 mmHg
- SBP 90 to160 mmHg

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Management of Hypotension: If SBP less than 90 mmHg and/or MAP less than 70 mmHg, initiate the following:

☐ vasopressin 0 to 0.04 unit/min IV infusion (preferred vasopressor)

☐ NORepinephrine 0 to 15 mcg/min IV (call MD if higher dose required)

Management of Hypertension; If BP greater than or equal to 160/90 mmHg sustained for greater than 5 minutes, then wean vasopressors and inotropes. If necessary start:

☐ hydrALAZINE 5 to10 mg IV q5min as needed for MAP greater than 110 and HR less than 80 bpm

☐ labetolol 2.5 to 10 mg IV q15min PRN (if HR greater than or equal to 80 bpm)

Management of Bradycardia with Associated Hypotension: If HR less than 60 bpm

☐ DOPamine IV infusion to a maximum of 10 mcg/kg/min

Management of Tachycardia

Manage as any critically ill patient. Ensure patient is euvolemic.

Hormonal Therapy:

☑ methylPREDNISolone (15mg/kg) _____mg IV q24h

(Maximum: 1 gram, rounded to the nearest 20 mg)

AND

☐ vasopressin as indicated for hypotension management (see above)

Antifungals and Antibiotics (To be ordered **ONLY** if lungs are being considered **OR** as needed for culture/imaging results):

☐ fluconazole 400 mg IV q24h

☐ vancomycin (25 mg/kg) _____ mg IV load, then (15 mg/kg) _____mg IV q12h

(*round doses to nearest 250 mg)

And one of the following:

☐ piperacillin-tazobactam 3.375 g IV q6h

OR

☐ meropenem 500 mg IV q6h (for documented or suspected penicillin anaphylaxis or history of Extended Spectrum Beta-Lactamase (ESBL) organisms)

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ELECTROLYTE MANAGEMENT

- Serum creatinine is less than 150 micromol/L or normal renal function
- Urine output is greater than 0.5 mL/kg/h for 2 consecutive hours
- Do not replace potassium using both intravenous and enteral routes as provided below

☐ Use local electrolyte orders – refer to internal hospital protocols

OR

Potassium Replacement: Chose from either IV or enteral route:

☐ IV potassium chloride must be given via **central line** when using pre-mixed bag of 20 mmol/50 mL

Serum Potassium	Dose/ Route
4 mmol/L and above	None
3.5 to 3.9 mmoL/L	☐potassium chloride 20 mmol IV over 30 min for 1 dose
3 to 3.4 mmol/L	☐potassium chloride 20 mmol IV over 30 min q30min for 2 doses
Below 3 mmol/L	☐potassium chloride 20 mmol IV over 30 min q30min for 3 doses

Check serum potassium 2 hours after end of final replacement dose

OR

☐ Enteral potassium chloride oral solution (20 mmol/15 mL) for enteral replacement

Serum Potassium	Dose/ Route
4 mmol/L and above	*None*
3.5 to 3.9 mmoL/L	☐potassium chloride 40 mmol NG/OG/PO BID for 2 doses
3 to 3.4 mmol/L	☐potassium chloride 40 mmol NG/OG/PO TID for 3 doses
Below 3 mmol/L	Replace potassium via IV route

Check serum potassium next morning and no sooner than 4 hours after final replacement dose

Phosphate Replacement

Serum Phosphate	Dose/ Route
0.8 mmol/L and above	None
Below 0.8 mmol/L	☐ SODIUM phosphate 15 mmol IV over 2 hours q4h for 3 doses

If phosphate less than 0.4 mmol/L, check serum phosphate 4 hours after end of final replacement dose otherwise, check serum phosphate with blood work the next day

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Magnesium Replacement

Serum Magnesium	Dose/ Route
0.7 mmol/L and above	None
Below 0.7 mmol/L	☐ magnesium sulfate 5 gram IV over 4 hours q8h for 3 doses

If magnesium less than 0.4 mmol/L, check serum magnesium 4 hours after end of final replacement dose; otherwise, check serum magnesium with blood work the next day

Calcium Replacement

Serum Calcium	Dose/ Route
1.2 mmol/L and above	None
Below 1.2 mmol/L	☐ calcium gluconate 2 gram IV for 1 dose

. Recheck ionized calcium level with next scheduled bloodwork

GLYCEMIC CONTROL

☐ Use local glycemic control orders – refer to internal hospital protocols

__OR__

☐ Initiate insulin regular IV infusion for sustained blood glucose greater than10 mmol/L.

Start infusion to maintain blood glucose between 7 to 10 mmol/L

Blood Glucose (mmol/L)	Insulin regular IV infusion
Less than 10	0 unit
10 to 14	2 unit/h
14.1 to 18	4 unit/h
Greater than 18	6 unit/h

OR

☐ _____

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SECTION II. WITHDRAWAL OF LIFE SUPPORT

COMFORT CARE

- Refer to ICU Comfort Care orders / ICU Palliation orders

Anticoagulation

☐ Heparin 400 unit/kg _____ unit IV push (round to nearest 1000 unit) when SBP less than 60 mmHg at impending death

(RN to consult with ICU Attending/BCT for timing of administration of heparin)

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