

# ZSFG Malignant Hyperthermia Intervention Checklist

1.  **Discontinue Triggers** (succinylcholine, inhaled anesthetics)
2.  **Start TIVA** (Total Intravenous Anesthesia), if anesthesia required
3.  **Hyperventilate 2-3 Times Predicted Minute Ventilation**
4.  **FiO2 1.0 at 10 L/min.** Keep circuit, absorber and machine.

## 5. Obtain MH Cart / Call for Help / Inform OR Team

- Designate an **Anesthesia Technician to obtain the MH Cart** <sup>\*Anes Wrkm or 6G\*</sup> (VOIP phone 31022)
- Page the Anesthesia D1** or Anesthesia Night Attending (VOIP phone 30001)
- D1 to designate an Anesthesiologist as **Team Leader**
- Inform Surgeons** of MH emergency and to coordinate the most expeditious surgical plan to finish the surgical procedure

## 6. Administer Dantrolene 2.5 mg/kg per dose IV Push <sup>\*MH Cart\*</sup>

**Repeat Dose until Symptoms Subside** (up to 10-30 mg/kg)

- Dilute only 5 mL Sterile Water for Injection in each 250 mg vial of Ryanodex (Dantrolene) (i.e., 75 kg patient = 1 vial Dantrolene per dose)
- Assign one team member to reconstitute Dantrolene
- Designate one provider to administer Dantrolene via IV Push

## 7. Team Leader to Designate Roles and Responsibilities

- Designate an **Anesthesia Provider to manage vent and anesthesia**
- Designate **Circulating RN as Lead Nurse**. Lead RN to delegate RN duties and to **call OR Front Desk** (x68134) to notify the following:
  - Overhead Page OR** to request for help in the MH crisis (x68134)
  - Call PACU** (x68127) to bring 4 large plastic bags of ice
  - Page the AOD** (x63519) to arrange for ICU disposition
  - Call OR Pharmacy** (x60242) to request meds as needed
- Designate an **Anesthesia Provider or CRNA to record the events** during the MH crisis on the MH Flowsheet <sup>\*MH Cart\*</sup>
- Designate a **provider to insert lines** (arterial line, additional large bore IV access), if not already present
- Designate a separate **provider to administer medications**
- Designate an **Anesthesia Technician to obtain:**
  - From the Anesthesia Workroom** (phone 31022)
    - Syringe Pump, Spiked IV, Triple Lumen CVC, A-line Sets
  - From the Main OR Anesthesia Workroom Refrigerator or 6G Med Room Refrigerator (6G10)**
    - 1L IV Plasmalyte x 3 bags
    - 3L NS for Irrigation x 1 bag
    - Insulin 10 mL vial / NS 100 mL IV Bag x 1 kit
  - From the Nearest Available Location**
    - Crash Cart

## 8. Call MH Hotline (1-800-644-9737) for additional help, as needed

## 9. Obtain and Monitor Labs and Studies <sup>\*sample lab sheets in MH Cart\*</sup>

- ABG Kit:** ABG
- Light Blue:** PT/INR, PTT, Fibrinogen, D-Dimer
- Gold Gel:** BMP, CK, LDH, Myoglobin, Thyroid (TSH, Free T4, Free T3)
- Lavender:** CBC, Platelets
- Grey:** Lactate
- Urine Dipstick / Collection Cup:** Hemoglobin / Myoglobin, UA
- Monitoring Equipment:** EKG, Core Temperature

## 10. Cool Patient to Goal Temp of 38°C using one or more methods:

- Cold Plasmalyte-148 IV <sup>\*Anes Workroom Fridge\* or \*6G Med Room Fridge 6G10\*</sup>
- Cold Sodium Chloride 0.9% for Irrigation via nasogastric, bladder, rectal and/or open cavity lavage <sup>\*Anes Workroom Fridge\* or \*6G Med Room Fridge 6G10\*</sup>
- Ice Packs for external surface cooling <sup>\*PACU\* or \*6G Kitchen 6G6\*</sup>
- Consider calling **SICU** (x69954) for intracool catheter / cooling blanket

## 11. Treat Acidosis (if not reversed by Dantrolene administration)

- Sodium Bicarbonate 8.4% IV 1-2 mEq/kg <sup>\*Crash Cart\*</sup>
- Ensure adequate minute ventilation

## 12. Treat Hyperkalemia and Associated Dysrhythmias

- Calcium Chloride 10% IV 10 mg/kg <sup>\*Crash Cart\*</sup>
- Avoid Calcium Channel Blockers**
- Sodium Bicarbonate (above) <sup>\*Crash Cart\*</sup>
- Insulin IV 0.15 units/kg (or 10 units) <sup>\*Anes Wrkm Fridge\* or \*6G Med Rm Fridge 6G10\*</sup>
- HIGH ALERT / TWO PROVIDERS MUST DOUBLE CHECK**
- Instructions: Dilute Regular Insulin 1 mL (= 100 units) in 100 mL NS Bag (Final Conc = 1 unit/mL), then give Insulin 10 mL = 10 units IV
- Dextrose 50% IV 1 mL/kg <sup>\*Crash Cart\*</sup> Monitor serum glucose.
- Treat dysrhythmias using ACLS algorithms <sup>\*Crash Cart\*</sup>

## 13. Place or Confirm Foley to Monitor Urine Output

- Aggressive hydration. Ensure UO of at least 2 mL/kg/hr.
- Consider diuresis with Furosemide 0.5-1 mg/kg IVP <sup>\*Anes Wrkm Omni\* or \*6G Omni\*</sup>

## 14. Transport to ICU (and continue Dantrolene 1 mg/kg IV Push q6h)

The MH response **must** be documented on the MH Flowsheet (MH Flowsheet is found in MH Cart Drawer 2 in the Patient Care Folder)