IRadimed CORPORATION
ADVANCED TECHNOLOGIES IN MR FLUID MANAGEMENT

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Cardiac Medication Scenarios

1.) Cardiac Stress test using Adenosine

Give Adenosine 140 mcg/kg/min IV as a 6 minute continuous infusion.
Total amount to be infused 24 mL.
Scan patient at 3 minutes and 6 minutes to evaluate coronary arteries.
Patient weight—186 lbs/ 84.5 kg
Adenosine concentration is 3 mg/1 mL

Calculations: 140mcg X 84.5kg = 11830 mcg
11830 mcg X 6 min = 70980 mcg or 70.98 mg
71 mg /3 mg = 23.6 mL

To program pump:

- Press Menu key
- Press Dose Rate calculator screen soft key
- Press Dose soft key, use up arrow to input 140, press Enter
- Conc field is highlighted; use up arrow to change to 3
- Press Enter twice to advance to pt weight field
- Use up arrow to input 84.5
- Press Enter twice, rate is automatically calculated. (237 mL/hr)
- VTBI field is highlighted; use up arrow to input 24.

2.) Cardiac Stress test using Dobutamine

Give Dobutamine 20 mcg/kg/min IV as a 10 minute continuous infusion.
Total amount to be infused 18 mL
Scan to evaluate coronary artery perfusion during and after infusion.
Patient weight –201 lbs/ 91.4 kg
Dobutamine concentration is 250mg/250 mL or 1mg/1mL

Calculations: 20mcg X 91.4 kg = 1828 mcg
1828 mcg x 10 min = 18280 mcg or 18.28 mg
18.28mg=18 mL

To program the pump:

- Press Menu key
- Press Dose Rate calculator screen soft key
- Press Dose soft key, use up arrow to input 20 press Enter
- Press Enter three times to advance to pt weight field
- Use up arrow key to input 91.4
- Press Enter twice, rate is automatically calculated. (110 mL/hr)
- VTBI field is highlighted; use up arrow to input 18

3.) Heparin infusion for anticoagulation post AMI

Patient may need scan post MI to determine extent of myocardial damage or locate blockage. Once heparin infusion begins, it must be continued to reduce risk of clotting and further myocardial damage. Scan can occur anytime after probable diagnosis of acute myocardial infarction (AMI).

Initial bolus dose of 60 units/kg over 10 minutes then continuous infusion of 12 units/kg/hour. Adjusted based on lab values.
Patient weight 206 lbs/ 93.6 kg
Heparin concentration 25000 units in 250 mL or 100 units/1mL

Calculations: 60 units x 93.6kg = 5616 units
5616 units/100 units = 56.16 mL over 10 minutes
56.16 mL X 6 = 337 mL/ hour bolus

12 X 93.6 = 1123.2 units/hour
1123.2/100 units = 11.23 mL/hour infusion

To program pump:

- Use up arrow to input 11.2 in rate field
- Press VTBI soft key
- Use up arrow to input 250
- Press the Bolus soft key
- Use up arrow key to input 337
- Press VTBI soft key
- Use up arrow to input 56