

SAMPLE INSULIN INFUSION CLINICAL ORDER SET

Acute Coronary Syndrome: Initial Management

Addressograph

PATIENT POPULATION

- For newly admitted patients, with acute coronary syndrome within the preceding 24 hours, and a random blood glucose greater than 11 mmol/L
- Target blood glucose 7 to 10 mmol/L

INVESTIGATIONS

On admission (if not already done in ER) ⇒ Blood glucose drawn by lab

Investigations Day 1 ⇒ HbA1c with first AM blood work

Daily Investigations ⇒ Daily serum potassium x 3 days

DIABETES MANAGEMENT

- Discontinue all previous diabetic therapies, including insulin and oral antihyperglycemic agents
- Start initial glucose/insulin therapy once the patient has been admitted to the CCU/telemetry area
- Mix 50 units regular human insulin in 250 mL 0.9 % sodium chloride for 0.2 unit/mL
- If blood glucose greater than 11 mmol/L start IV insulin infusion at 5 units/h
- Bedside Blood Glucose check one hour after starting insulin/glucose infusion then go to Table 1

TABLE 1:

Instructions for first Bedside Blood Glucose Monitor (BBGM) check one hour after starting insulin/glucose infusion.

Blood Glucose (mmol/L)	Infusion Rate Change	Bolus Dose	Repeat Blood Glucose
Greater than 11 mmol/L	No Change	–	1h, then go to Table 2
7 to 11 mmol/L	Decrease infusion to 4 units/h	–	1h, then go to Table 2
4 to 6.9 mmol/L	Decrease infusion to 3 units/h	–	1h, then go to Table 2
Less than 4 mmol/L	<ul style="list-style-type: none"> • Decrease infusion to 2 units/h • Call physician managing diabetes • Follow hospital hypoglycemia protocol 	50 mL D10W IV	1h, then go to Table 2

TABLE 2:

Instructions for all Bedside Blood Glucose Monitor (BBGM) checks after the first hour.

Blood Glucose (mmol/L)	Infusion Rate Change	Bolus Dose	Repeat Blood Glucose
Greater than 15 mmol/L	Increase infusion by 1 unit/h	8 units regular human insulin IV	1h
11 to 15 mmol/L	Increase infusion by 0.5 units/h	-	1h
7 to 10.9 mmol/L	No change	-	2h
4 to 6.9 mmol/L	Decrease infusion by 1 unit/h	-	1h
Less than 4 mmol/L	<ul style="list-style-type: none"> • Stop infusion • Call physician managing diabetes • Follow hospital hypoglycemia protocol 	50 mL D10W IV Repeat bolus q30minutes until blood glucose results greater than 7 mmol/L	q30 minutes until glucose greater than 7 mmol/L, then restart infusion at 1 unit/h less than the rate before infusion stopped

- Discontinue IV insulin infusion after 24 hours or, on the clinical order of physician managing diabetes.
- Thereafter, follow handwritten orders or subcutaneous insulin clinical order set; physician managing diabetes to complete.

Signature, Designation:	College License#:	Date:	Time:
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