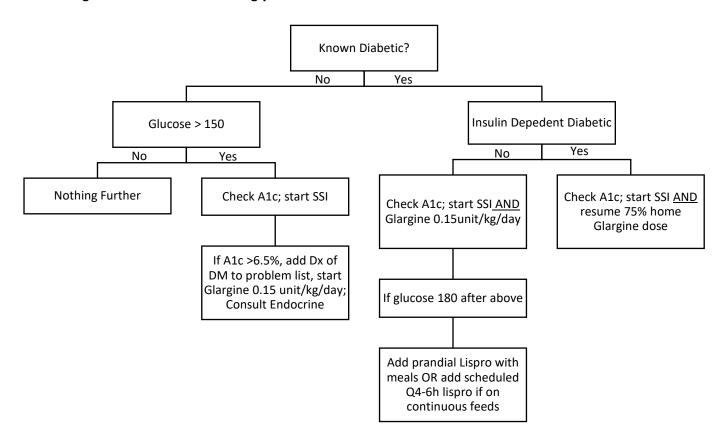


DIVISION OF ACUTE CARE SURGERY

TRAUMA GLYCEMIC CONTROL PROTOCOL

Initial Management: Maintenance of Euglycemia:



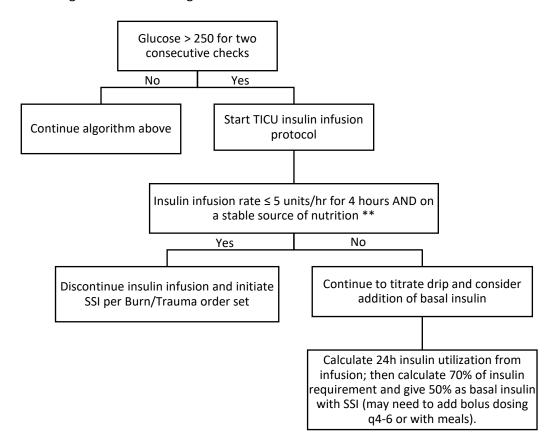
- SSI alone without basal insulin is not recommended for Type 2 Diabetes
- Basal insulin should NOT be held if patient is NPO or not eating
- All patients with insulin orders need the hypoglycemia protocol of the order set
- Consult Endocrinology for: Type 1 DM, use of an insulin pump, discharge recommendations for new diagnosis of DMII (A1c >6.5%) or A1c > 9% in known diabetic
- USE CAUTION in patients with renal dysfunction, elderly, and those with large volume fluid shifts (discuss with pharmacy)
- Consider discontinuing blood glucose monitoring and sliding scale insulin if:
 - o Blood glucose remains ≤ 150 mg/dL AND tube feed goal has been met for 24 hours and off vasopressors



DIVISION OF ACUTE CARE SURGERY

Insulin Infusion (TICU)

- If two successive blood glucose values are ≥ 250 mg/dL, a continuous insulin infusion should be considered using the TICU insulin infusion protocol
- Patients should have a glucose source (i.e. D10 at 30mL/hr), unless D5LR or D5NS are ordered at >50 mL/hr, tube feeds are at 50% of goal or PN is infusing



References:

- 1. Yendamuri, Saikrishma, et al. Admission hyperglycemia as a prognostic indicator in trauma. J Trauma 2003; 55:33-38.
- 2. Laird A, et al. Relationship of early hyperglycemia to mortality in trauma patients. J Trauma 2004; 56:1058-1062.
- 3. Sung J, et al. Admission hyperglycemia is predictive of outcome in critically ill trauma patients. J Trauma 2005; 59:80-83.
- 4. Van den Berghe G, Wouters P, Weekers F, et al. Intensive Insulin Therapy in Critically III Patients. New England Journal of Medicine 2001; 345:1359–1367.
- 5. The NICE-SUGAR Study Investigators, Finfer S, Chittock DR, et al. Intensive versus Conventional Glucose Control in Critically III Patients. New England Journal of Medicine 2009; 360:1283–1297.
- 6. Jacobi J, Bircher N, Krinsley J, et al. Guidelines for the use of an insulin infusion for the management of hyperglycemia in critically ill patients. Critical Care Medicine 2012; 40:3251–3276.
- 7. Mowery NT, Guillamondegui OD, Gunter OL, et al. Severe hypoglycemia while on intensive insulin therapy is not an independent predictor of death after trauma. The Journal of Trauma: Injury, Infection, and Critical Care 2010; 68:342–347.



DIVISION OF ACUTE CARE SURGERY

- 8. Mowery NT, Gunter OL, Kauffmann RM, et al. Duration of time on intensive insulin therapy predicts severe hypoglycemia in the surgically critically ill population. World Journal of Surgery 2011; 36:270–277.
- 9. Krinslely J, et al. Glycemic variability: A strong predictor of mortality in critically ill patients. Crit Care Med 2008; 36:3008-3013.
- 10. Kauffmann RM, Hayes RM, Jenkins JM, et al. Provision of Balanced Nutrition Protects Against Hypoglycemia in the Critically III Surgical Patient. Journal of Parenteral and Enteral Nutrition 2011; 35:686–694
- 11. Bode, BW, Braithwaite SS, Steed RD, Davidson PC. Intravenous insulin infusion therapy: indications, methods, and transition to subcutaneous insulin therapy. Endocrine Practice 2004; 10(2):71-80.

Last revised: March 2023, January 2020

Revision Team:

Michael Derickson, MD

Jill Streams, MD- Trauma PI Director
Bradley Dennis, MD- Trauma Medical Director
Caroline Banes, DNP, ACNP-BC
Kayla Harding, MSN, AGACNP
Leanne Atchison, PharmD