



Management Protocols *in* **ICU**

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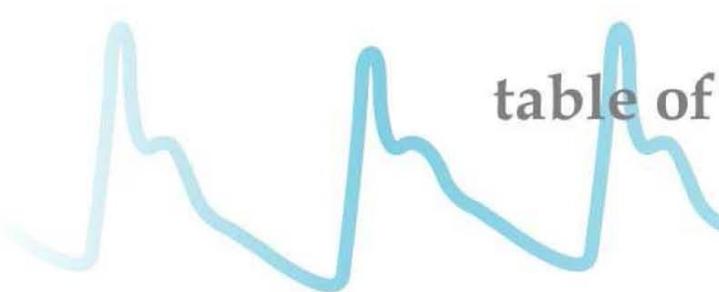
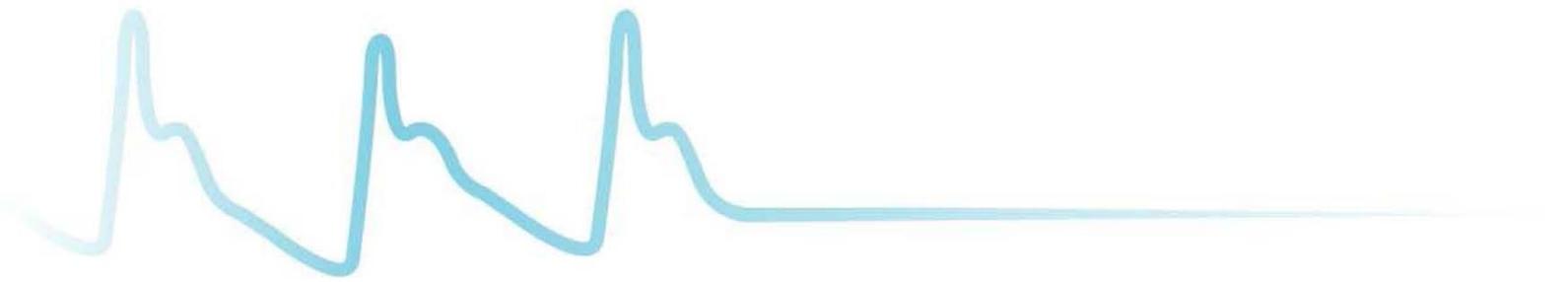


table of

Content

Foreword	07
List of Management Protocols	08
ICU Management Protocol No. 1 <i>Admission and Discharge Policy in the Intensive Care Unit</i>	10
ICU Management Protocol No. 2 <i>Investigations and Microbiological Surveillance in the Intensive Care Unit</i>	16
ICU Management Protocol No. 3 <i>Ventilatory Strategies in Severe Hypoxemic Respiratory Failure</i>	19
ICU Management Protocol No. 4 <i>Weaning from Mechanical Ventilation in the Intensive Care Unit</i>	25
ICU Management Protocol No. 5 <i>Inotropic and Vasopressor Support in Intensive Care</i>	35
ICU Management Protocol No. 6 <i>Enteral and Parenteral Nutrition in the Intensive Care Unit</i>	42
ICU Management Protocol No. 7 <i>Sedation and Delirium in the Intensive Care Unit</i>	51
ICU Management Protocol No. 8 <i>Venous Thromboembolism Prophylaxis</i>	63
ICU Management Protocol No. 9 <i>Stress Related Mucosal Disease (SRMD) Prophylaxis in The Intensive Care Unit</i>	70



ICU Management Protocol No. 10 <i>Blood Glucose Management in the Intensive Care Unit: Insulin Infusion Protocol</i>	73
ICU Management Protocol No. 11 <i>Early Mobilization for Patients in the Intensive Care Unit</i>	76
ICU Management Protocol No. 12 <i>Withholding and Withdrawal of Life Support Therapy in the Intensive Care Unit</i>	80
ICU Management Protocol No. 13 <i>Policy on Mechanical Ventilation outside the Intensive Care Unit</i>	86

Blood Glucose Management in the Intensive Care Unit: Insulin Infusion Protocol

Introduction

Stress hyperglycaemia is associated with poor clinical outcomes in critically ill patients. Factors contributing to hyperglycemia in critical illness include the release of stress hormones, the use of medications, the release of mediators in sepsis and trauma and insulin resistance.

Principles

1. The aim is to maintain blood glucose level (BGL) between 6.0-10.0 mmol/l.
2. Glucose control needs to be implemented safely to avoid insulin induced hypoglycaemia.

Insulin Protocol

1. Blood should ideally be sampled from the arterial line rather than capillary as the former is more accurate in critically ill patients.
2. Perform blood glucose level (BGL) on ICU admission. Start protocol when BGL exceeds 10 mmol/l for two consecutive readings, 1h apart.
3. For continuous intravenous insulin infusion, use soluble insulin 50 units in 50 ml 0.9% NaCl.
4. Blood glucose monitoring: Initially q1h until BGL is within goal for 2h, then q2-4h. If any of the following occurs, resume q1h monitoring until BGL is again stable.
 - a. Hypoglycemia episodes (<3.5 mmol/l)
 - b. Starting or stopping dialysis with dextrose containing dialysate
 - c. Starting or stopping TPN or enteral feedings
5. Patients who develop symptoms suggestive of hypoglycaemia e.g. tremors, tachycardia, sweating, confusion and agitation should have BGL checked.
6. Administration of insulin reduces potassium levels. Check K⁺ at least twice daily and more often if the insulin infusion rate is high.