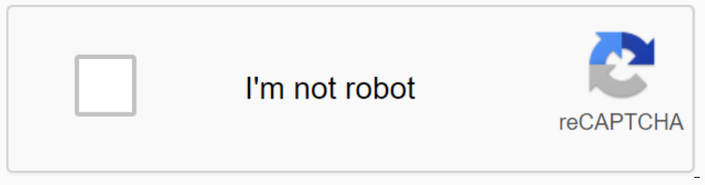

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Hyperglycemia journal pdf

• Diabetes mellitus and hyperglycemia are common comorbidities in hospitalized patients. • Subcutaneous insulin is the preferred treatment for hyperglycemia in non-critically ill patients. • The understanding of insulin pharmacodynamics allows to adapt insulin therapy to coincide with daily glucose excursions. • Glucose targets of 140-180 mg/dL are recommended for most hospitalized patients. • Prolonged hyperglycemia or hypoglycemia in the hospital can be removed. Diabetes mellitus and hyperglycemia are common in hospitalized patients. Uncontrolled hyperglycemia during hospitalization is associated with poor outcomes. A glucose target of 140-180 mg/dL is recommended. Subcutaneous insulin programmed with basal, prandial and correctional components is preferable to treat diabetes in non-critical patients. The pharmacodynamics of insulins differ, and the type of insulin used should coincide with daily glucose excursions. Different hospital settings can justify the use of a particular type of insulin to achieve optimal glucose control. This document describes approaches to addressing hyperglycemia in hospitalized patients based on pharmacodynamic insulin profiles. To read this article in full you will need to make a paymentStandards of medical care in diabetes: 2014.Diabetes Care. 2014; 37: S14-S80View in article Scopus (3180) PubMed Crossref Google ScholarManagement of hyperglycemia in patients hospitalized in non-critical care environment: a clinical practice guide of endocrine society. J Clin Metab endocrinol. 2012; 97: 16-38View in article Scopus (584) PubMed Crossref Google ScholarGlucose normalization and results in patients with acute myocardial infarction. Arc Intern Med. 2009; 169: 438-446View in article Scopus (89) PubMed Crossref Google ScholarReducing hyperglycemia hospitalwide: the basal-bolus concept. Jt Comm J Who Patient Saf. 2009; 35: 216-223Visuality of article Ghosal S, Sinha B. Hipoglycaemia and CV risk: perceptions and reality. Diabetes Metab Syndr. . [Epub before printing]. See in the article Address hyperglycemia from hospital admission to discharge. Curr Med Res Opin. 2010; 26: 589-598View in article Scopus (33) PubMed Crossref Google Scholar Hospital management of hyperglycemia and diabetes. Diabetes Clin. 2011; 29: 36-39View in article Scopus (30) Crossref Google ScholarEnhancing insulin use safety in hospitals: practical recommendations from an expert consensus panel of the ASHP Foundation. Am J Health Syst Pharm. 2013; 70: 1404-1413View in article Scopus (62) PubMed Crossref Google ScholarIntensive implementation of insulin protocol and results in the medical and surgical rooms of a Veterans Affairs Medical Center.Ann Pharmacother. 2010; 44: 249-556View in article Scopus (21) PubMed Crossref Google ScholarDinsmoor RS. sensitivity to insulin. Self-management of diabetes. February 21, 2013. . Accessed 9 October 2014.View in Implementation of the glucommander method of adjusting insulin infusions in critically ill patients. Can J Hosp Pharm. 2011; 64: 333-339Vision in the article Transition from insulin pump therapy from outpatient to outpatient environment: a review of the experience of 6 years with 253 cases. J Diabetes Sci Technol. 2012; 6: 995-1002View in article Scopus (32) PubMed Crossref Google ScholarS In compliance with national ethical guidelines, authors do not report any relationship with business or industry that would pose a conflict of interest. DOI: Access this article on ScienceDirect hyperglycemia is the medical term for blood glucose (sugar) that is too high. High blood glucose (HBG) is a common problem for people with diabetes. Blood glucose can also increase too high for patients in hospital, even if they don't have diabetes. This patient guide explains why some patients develop HBG when they are hospitalized and how their HBG is treated. Until about 10 years ago, doctors thought HBG in hospital patients was not harmful as long as their blood sugar stayed in or below 200 milligrams per deciliter (mg/dL). Recent research shows that HBG above 180 increases the risk of complications in hospital patients. Keeping blood sugar below this level with insulin treatment reduces the risk of these problems. Most doctors agree that controlling blood sugar so it stays below 180 mg/dL is best for very sick patients in intensive care units (ICU). Less clear is what the best blood sugar target should be for patients who are admitted for general surgery or non-critical medical conditions. In some patients, insulin treatment can cause low blood sugar, called hypoglycemia. Like blood sugar levels that are too high, blood sugars that are too low are not safe and should be avoided. This patient guide for glucose control in the hospital is based on the Endocrine Society's practice guide for health care providers in the prevention and treatment of HBG. This guide applies only to patients on a regular hospital floor, not those in an ICU. What causes HBG in hospital? Many conditions can cause or worsen HBG in hospital patients. These include: •. Physical stress of disease, trauma or surgery•. Inability to move. Steroids such as prednisone and some other medications•. Skip diabetes medications•. Liquid foods donated through a feeding tube or nutrition donated intravenously. Why is HBG insecure? HBG patients have more problems in hospital, including: •. Longer hospital stay.. slower wounds.. More infections•. More disabled after hospital discharge•. Increased risk of death How is HBG found? Health care providers find HBG doing a simple blood test. Blood sugar is usually measured by pointing the finger and testing a drop of blood with a glucose meter. Your blood sugar should be measured when you are admitted to hospital. You can this test more than once if you are at high risk for HBG. For example, you have an increased risk if you have diabetes, are treated with medications that increase blood sugar, or are getting tube feeding or intravenous feeding (IV). HBG in hospital is defined as a pre-eat blood sugar above 140 mg/dL. After finding HBG, your care providers will check your blood sugar before meals and at bedtime. You may need more testing in some cases. This includes if you are not eating, are receiving insulin IV, have a change of medications that could affect blood sugar, or have frequent low blood sugar attacks (hypoglycemia). Open on the new TabDesulin slide is the best treatment for HBG in the hospital, even if you don't have diabetes or don't use insulin at home. What are the blood sugar targets in the hospital? Health care providers want most ICU patients to have a blood sugar between 110 and 180 mg/dL. Outside the ICU, most providers aim to keep blood sugar between 100 and 140 before meals and below 180 on other occasions. What is the treatment of HBG? Insulin is the best treatment for HBG in hospital. This is true even if you don't have diabetes or if you don't use insulin at home. Insulin injection is the most effective way to control blood sugar. In addition, some diabetes pills can cause low blood sugar or other health problems while you are sick. For these reasons, you may need to stop taking your non-insulin diabetes medications during your hospital stay. Hospital patients with HBG should receive insulin traits under the skin (subcutaneous injections). You should get basal insulin (long or intermediate action) once or twice a day to keep blood sugar levels constant. Before meals, getting bolus insulin (quick action) helps prevent blood sugar levels from going too high after eating. In addition to insulin when eating, some patients with HBG may need additional insulin injections. This constant treatment prevents HBG or, in some patients, a dangerous health problem called diabetic ketoacidosis (when acids and substances called ketones accumulate in the blood due to lack of insulin). For all HBG patients, good nutrition is important to help control blood sugar. A dietitian should work with you to plan your meals. The point is to make sure you get enough calories and eat the right amount and types of sugars or carbohydrates. These include whole grains, fruits, vegetables and low-fat milk. How should diabetes patients who are having surgery be treated? Before surgery, patients take insulin should continue to receive insulin. If you don't take insulin, your care providers will usually stop non-insulin medications and advise you to receive insulin if you develop HBG while you're in hospital. Before and after surgery, all patients with type 1 diabetes and most patients with type 2 diabetes should receive insulin to prevent HBG. Insulin can be given through an IV or by multiple injections under the skin. When you can eat again, you should get the time to eat (bolus or or insulin before meals. Is there a risk of low blood sugar? Low blood sugar (defined as a blood sugar below 70 mg/dL) can occur with insulin treatment, if you are not eating, or after a sudden stop at tube or IV foods. If you get insulin or other diabetes medications, your care providers will check your blood sugar often to make sure it doesn't fall too low. They may need to change the dose or timing of their insulin to avoid low blood sugar. What can you do to help with your hospital care? If you have diabetes, let your nurse and doctor know when you go to the hospital. Ask your doctor to make sure that this information goes into your patient chart. You should have your blood sugar checked at least

four times a day (before each meal and at bedtime if you are eating regular meals or every six hours if you are not eating). For your care providers to know your usual blood sugar control, you should have a hemoglobin A1c test (blood test showing your average blood sugar over the past three months). If you don't have diabetes, but your blood sugar is above 140 mg/dL, you'll need to have this test. If your hospital provider diagnoses you with diabetes, you will need to learn how to do glucose tests at home and how to recognize and treat high and low blood glucose levels. In some cases, you may also need to learn how to inject insulin. When you leave the hospital, you will receive a written care plan. If you had HBG or low blood sugar in hospital, your care plan should include how to control your blood sugar and when to see your doctor below. You should also explain how and when to take your diabetes medications. Following this advice, you will have the best chance of a good recovery after your stay in the hospital. Stay.