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AH1 Assignment

Patient 1

Pre-surgical assessment of the diabetic patient is conducted because of diabetic patients' face more challenges during the process of surgery. The blood sugar level is recorded as 200. Pre-operative assessment is arranged for the patient of diabetes type 1 (Simha & Shah, 2019). It is important to determine if the patient can be treated by manipulation during a short starvation period. It is crucial to confirm the use of intravenous insulin infusion. There is a need for following the NHS guidelines for ensuring the safety of Type 1 diabetic patient, undergoing surgery. The guidelines state that "the HbA1c should be < 69 mmol.mol-1 (8.5%) for elective cases” (Barker, et al., 2015).

The nurse should check the glycemic levels at the time when surgery is referred. Observations are required on the type of diabetes, duration, complications and adopted treatments. Before surgery, it must be confirmed that diabetic control was maintained at 69 mmol.mol-1 (8.5%) for the last three months. Fluctuations in the rate will cause a delay in surgery.

Type I diabetes causes the destruction of the pancreatic cells that is required for synthesizing insulin. These patients take insulin on a daily basis that represent half of their requirements. During or before surgery basal insulin must be continued because its prevention causes risks of hyperglycemia. The surgical procedure can cause metabolic impacts that develop stressed state causing hyperglycemia. Plasma glucose levels must be used for removing withdrawal of glucose-lowering and stressors.

The most critical pre-operative procedure is ensuring peripheral insulin resistance. Series of diagnostic tests are performed before surgery. Fasting plasma glucose is performed for ensuring that the level is greater and equal to 126 mg/dl. Random plasma glucose test is performed. Glucose tolerance testing is performed in which the patient will keep the highest level of sugars in blood and evaluated after every three hours.

The nurse confirms that the patient don't intake metformin the night before surgery. Metformin is not started within the 48 hours of surgery. This is because metformin involves risks of lactic acidosis. Continuation of metformin can cause complications for the patient after surgery including renal failure and dehydration. The patient is also prevented from taking Sulphonylureas because it requires the setting of glucose infusion needs. basal insulin is administered with two SC injections. SC injection is administered for corrective bolus administration (Simha & Shah, 2019). In a case when CSII is curtailed long-acting basal insulin is injected immediately.

As the patient needs to have an empty stomach before surgery it is preferable to set up a system of glucose infusion at 0700h. when glycaemia is more than 16.5 nmol/L, infusion must be continued. The medications that are needed to be stopped include Sulphamides, Glinides, DDP-4 inhibitors and GLP-1 analogue (Barker, et al., 2015). Other pre-operative measures include; checking that the value of HbA1c is obtained. The patient must take normal dinner on the day before surgery. Fluids must be cleared two hours before induction and on the morning of surgery. The normal dose of insulin is administered on the pre-operative day. the patient must not engage on prolonged fasting before surgery. The nurse must monitor glycaemia in every 1-2 hours.

The nurse is responsible for maintaining the optimal level of blood glucose. She also attempts to minimize the metabolic impacts of anaesthesia. She ensures that the patient had taken an appropriate meal on the day before surgery. Identified medications must be stopped on the morning before surgery that could have adverse impacts on the patient.

References

Barker, P., Creasey, P. E., Dhatariya, K., N. Levy, A. L., Nathanson, M. H., Penfold, N., et al. (2015). Peri-operative management of the surgical patient with diabetes. *Association of Anaesthetists of Great Britain and Ireland*.

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