Crohn’s Disease Clinical Assessment and Nursing Care

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Pre-Administration Assessment for Pethidine

A nurse needs to take many factors into consideration before administering to any patient. First, I need to check Jordan for any interactions with drugs or herbs. According to Wang et al. 2016), pethidine is known to be both physically or chemically incompatible with thiopentone solutions or any solution that contains heparin sodium, morphine sulfate, idarubicin hydrochloride, sodium bicarbonate, sulphafurazole diethanolamine, frusemide or acyclovir sodium. Also, pethidine is incompatible with iodine, iodide, and alkalis. Furthermore, it is vital to check Jordan for any allergies because it has a cough reflex action that causes pethidine’s depressant effect (Wang et al., 2016). Finally, assessing Jordan’s mental status and suicidal tendencies is critical to the well-being of the patient. Pethidine is characterized by its depressant effect on the central nervous system, hence causing drowsiness, depression, and general impairment of coordination. Hence, assessing mental health and suicidal tendencies gives the nurse ideas on how to administer the doses depending on the results of the assessment. Mental changes such as anxiety, hallucinations, poor concentration, and agitation have been reported in some cases when administering pethidine.

Nursing Interventions During Opioid Administration

During the administration of pethidine, various interventions need to be considered to ensure that Jordan gets better without many effects from the medicine. Iversen, 2016 states that “the nurse should keep opioid and antagonist and facilities for assisted or controlled respiration readily available during parenteral administration and, also, when injecting subcutaneously into chilled areas of the body, or patients in shocks.” The reason for this is that impaired perfusion is known to cause a delay in absorption (Iversen, 2016). Iversen further states that the doses in such cases, usually, an excessive amount of pethidine is absorbed when blood circulation is restored to its normal state. The period Jordan is receiving reassures him that addiction to pethidine is unlikely because “most patients who are receiving opiates for medical reasons are known not to develop any dependence syndromes” (Iversen, 2016).

Monitoring Therapeutic Effectiveness

After administering pethidine, the nurse should monitor the effectiveness of the medicine by observing a decrease in the symptoms of the disease. A decrease in the symptoms of the diseases

means that the dosage is effective, and if otherwise, the nurse can think of changing the dosage. Also, monitoring the side effects ensures that Jordan recovers at the best pace and hence avoids the effects that are associated with the side effects, such as accidents. The nurse should also advise the patient on the safety precautions to avoid getting reinfection and deal with the after-effects of taking the drug.

Clinical Features of Crohn's Disease

Ramadas et al., 2010 describe Crohn's disease "as an idiopathic, chronic inflammatory process that affects any part of the gastrointestinal tracts from the mouth to the anus." It is characterized by periods of symptomatic relapse and remission experienced by the patient (Ramadas et al., 2010). It is a bowel inflammatory disease that causes signs and symptoms of pain in the abdomen, frequent emptying of the intestines, and diarrhea. The symptoms of Crohn's disease are bloating, constipation, or pain or bleeding when moving the bowel.

Causes and Inflammatory Pathophysiology

"Although the cause of Crohn's disease is still unknown, some scientists suspect that strains of bacteria such as mycobacterium cause the infection" (Ramadas et al., 2010). On activation of the immune system in the small intestines, there is inflammation caused in the tissues where activation occurs. Individuals with IBD experience an immune system that is activated without any harmful invader, resulting in chronic inflammation and ulceration. "During the initial stages, Crohn's disease causes small, scattered, shallow, crater-like erosions on the inner surface of the bowel" (Ramadas et al., 2010). With time, the erosions become deeper and larger, turning into real ulcers that cause scarring and stiffness of the bowel. Ultimately, the bowel becomes narrower and obstructed, causing perforations in the walls of the bowel and bacteria that infect adjacent organs and the surrounding abdominal cavity (Ramadas et al., 2010). The obstruction is responsible for Jordan's loss of weight because it causes obstruction of food, fluid, and gas from the stomach and small intestine and into the colon. Obstruction causes nausea and vomiting, meaning that there is not enough diet for Jordan to build his body. "With the development of puncture holes in the walls of the intestine, creating a tunnel between the intestine and the adjacent organ causing collection of infected pus forming abdominal abscess" (Ramadas et al., 2010).

Methylprednisolone Pharmacology and Nursing Care

According to García-Muñoz et al. (2014), methylprednisolone is a derivative of prednisolone that has similar anti-inflammatory action. The chemical formula of methylprednisolone is C22H30O5, and it has a molecular weight of 374.477 g/mol. It is a corticosteroid whose mechanism of action is as a

corticosteroid hormone receptor agonist. Methylprednisolone is described as a synthetic corticosteroid characterized by its anti-inflammatory and immunomodulatory properties. Methylprednisolone acts by binding to and activating specific nuclear receptors that result in altered gene expression and inhibiting the production of proinflammatory cytokines. These specific nuclear receptors result in a decrease in the number of circulating lymphocytes, induce cell differentiation, and finally stimulate apoptosis in the populations of the sensitive tumor cell. For patients with edema, such as Jordan, methylprednisolone is important so as to avoid a rebound increase in intracranial pressure. This helps reduce the fistula caused by Crohn's disease. The pressure is reduced by the action of methylprednisolone, which separates the glucocorticoid and mineralocorticoid effects, resulting in a reduced incidence of sodium and water retention.

References

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