Pharmacology and pathologies treatment

Health & Medicine, Nursing

What aspects of pharmacokinetics may be altered because of her pathologies? The main thing that will be altered due to the patient's pathologies will be the absorption – how the substance enters circulating blood (Birkett, 2002). If the treatment for PVD were to be administered orally, then dissolution and ionization of the treatment may be affected (Dreyer, 2005). However, it is impossible to make conclusions about the exact pharmacokinetics without knowing how precisely how the gastrointestinal tract has been affected in this patient.

Additionally, the PVD affects blood circulation (as an obstruction of the large arteries), which means distribution will be affected (Dreyer, 2005) and the drug may not disseminate to all necessary tissues.

What effect will her pathologies have on the dosage of drugs she receives?

The dosage of drugs this patient receives will be initially higher than the standard recommended because the circulation loss means that the required amount of drug may not have the desired distribution effects (Dreyer, 2005).

Due to the gastrointestinal tract removal, the administrating doctor may decide that any treatment for PVD needs to be administered intravenously, and as such the dosage will be lower due to the differences in absorption via this method.

What factors must the nurse monitor to evaluate Ms Smith's reaction to her prescribed medication?

The nurse must monitor the progression of the symptoms of PVD. For example, if the patient was presenting with claudication, then the extent of this would need to be continuously monitored throughout the treatment

period to see if this was improving. Additionally, blood pressure would need to be measured periodically to see if there was any improvement in blood flow throughout the vascular system (Birkett, 2002). The patient would also need to be monitored for cardiovascular events such as cardiac arrest or stroke as these occur more frequently in patients presenting with PVD (Dreyer, 2005).

Utilize the principles of pharmacokinetics to determine what contributed to the excessively high aPTT eight hours after beginning the infusion.

Heparin is cleared from the body one of two ways, depending on the dosage used. At low doses it is cleared through the reticuloendothelial system, and at high doses both this and a renal clearing system are employed. As the dosages involved here are fairly high, and clearance is reduced in patients with cirrhosis of the liver or renal failure (Granger et al., 2001), we may make the assumption that there may be some issues in the renal clearing system in this patient and we may have to make further investigations into the state of the kidney.

Works Cited

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