Diuretics drugs

Health & Medicine, Nursing

Diuretic Drugs Objectives under the Bloom’s Taxonomy The following Cognitive Domain objectives cover the mental skill and knowledgein relation to the understanding of diuretic drugs.

i. To gather information and recognize/recall the information in future. This cognitive domain usually involves the listing, identifying, recognizing or visualizing knowledge that was previously taught or captured.

ii. To change attitude and understand ourselves more under the affective domain that deals with the growth both in feelings and emotions.

iii. To develop and renew skills which are in manual or physical form after educative sessions on diuretics drugs under the psychomotor domain (Bloom, et. al. 1984).

Type and class of medication (Diuretics Drugs)

There are many classes of drugs under which diuretics can be classified. One of these classes is potassium-sparing diuretics, also referred to as aldosterone antagonist. This class can be used as diuretics to prevent the morbidity and mortality in patients. Another drug in this class is spironolactone. Another drug class used as diuretics is the Thiazide diuretics, which is a first-line therapy when medical practitioners are treating hypertension (Jin et al, 2014). Other classes of diuretics include the calcium-sparing diuretics, osmotic diuretics, low-ceiling diuretics among others.

Mechanism of Action of Diuretics Drugs

Just as vasodilators are, diuretics are also used to cure diseases such as diabetes and high blood pressure, among other respiratory diseases. These drugs aid the maintenance of the right blood pressure, and also increase the release of toxins from the body system. These diuretic drugs also improve

the cardiac output and increase the pressure in the pulmonary capillaries. For diabetes patients, mostly, practitioners prefer to administer ultra-filtration therapy, claiming its effectiveness over diuretics.

Indications of Use

Before taking diuretic drugs, a patient ought to tell the doctor if he or she is taking other medications to avoid mixing drugs (diabetes and heart conditions) present a high risk in the event of drug contamination. Every diuretic drug comes with a medication guide that helps a patient to follow procedural treatment to hypertension or diabetes (Breidthardt et al, 2013). Diuretics therapy, for instance when administered to heart failure patients, has diverse functions that pose physiological effects to the body. The cardinal component in diuretic therapy provides a sodium balance in heart failure management. Other effects include improving dyspnea, general functioning of the cardiac system and also enhance exercise tolerance. Also, such diuretics reduce filling pressures in the cardiac system and also enhance decongestion in the pulmonary tubes (Blijderveen et al, 2014).

1st and 2nd Generation Diuretics

This section relates to blood pressure (hypertension). Diuretics can either be administered as first generation or second subsequent generation. Studies indicate that when diuretics are given to hypertension patients as first generation medication, the outcome is outstanding and the patients experience significant reduction of pressure, hence reduced incidences of stroke and heart failure. However, low-dose diuretics therapy also reduces the incidences of further coronary infections, regardless of the patient’s gender.

2nd generation of treatment and clinical trials have also be conducted, where active treatments have been compared to diuretics which have been more effective in the prevention of major disease complications an example being myocardial infractions. Diuretics can, therefore, be administered in accordance with the requirements of the patient, considering both 1st and 2nd generation is effective in the great reduction of health hazard (Richard & Izzo 2003).

Common trade names

Loop diuretics, Thiazide congeners, thiazides.

Allergies and Adverse Effects

Photosensitivity dermatitis is one side effect though it rarely occurs. Most of the thiazides do cause photosensitivity. In terms of cross-sensitivity, all diuretics are viable to cause it, with the exception of ethacrynic acid. However when the allergy is not extreme (especially for sulfonamide allergy) then loop and thiazide diuretics may be administered cautiously. Though rare, necrotizing pancreatitis can be caused by thiazide therapy. Other allergic symptoms and effects include colds, fevers, pains in the joint among others, happening after the administration of diuretics.

Herbal Considerations

The rising interest to diuretics drugs had led to the reliance of herbal drugs. In other cases, patients overarch to over the counter drugs (OTCs). However, there are certain considerations that should be considered if patients can revert to these kinds of drugs. The following are the medicinal and dietary considerations for such a diuretic supplements

i. Herbal teas should never be mixed with prescription drugs. Herbal content

may contaminate the prescription drugs and impact upon cardiovascular conditions, developing more adverse side effects (Agarwal & Sharma, 2012).

ii. The OTC supplement mainly used is Pamabrom, relating to theophylline. The compound of acetaminophen in Pamabrom should be considered in dosages that adhere to compensation of electrolytes and nutrients lost from prescription.

iii. Those under medication are advised to eat healthy, include the three course meal plan. Cereals, fruits and generally whole grains are recommended.

iv. Those patients using herbal medicines are required to ensure they are approved and satisfied, and should seek further medication in the event the herbs do not work (Mitra et al, 2012).

Conclusion

The administration of diuretic drugs by nurses to special populations should be considered through dosage administration since the after effects occur on large scale. This special population includes elderly, women and children who are the most prone to using diuretic therapy. For children, the nurse should individualize the dosage, considering the ages of the children. Their organs are usually not fully developed as well as their body systems, hence, wrongful dosage might affect treatment though poor organ development. To the elderly an initial dosage of 125 mcg should be given once a day for the treatment of heart failure; old age is associative to decline in the processes of major organs and systems and should be monitored to prevent failure of treatment programs. To females suffering reproductive problems and undergoing pregnancy, nurses should provide alternative diuretics to prevent

harm to the unborn infant.

Test Questions

In order to promote the progression of the stages of cognitive process while in diuretic drugs, what supplement should be offered to a patient?

A. Black tea

B. Caffeine

Correct Answer is Black Tea, because it improves mental alertness of a patient while increasing urine flow.

Which of the following is diuretic and affects the affective domain of a patient?

A. Water

B. Caffeine

Correct answer if Caffeine. After taking it, a patient feels jittery, and affects his or her ability to sleep. Other emotions and feelings resultant are insomnia, fatigue and nervousness.

Which diuretic drug interactions are required to be used by a patient when psychomotor skills are required?

A. Oral

B. Water Pills

Correct Answer is water pills because the liquid content in them help in eliminating excess water, sodium, and chloride that contribute to edema and hypertension.

References

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