**Medication Adherence Activity: Gemfibrozil and Hyperlipidemia**

**Introduction**

 Gemfibrozil is an important lipid-regulating drug used in the treatment of hypertriglyceridemia in types IV and V of Hyperlipidemia. The treatment is through its addition to the diet of the patients who are vulnerable to pancreatitis and have a negative response to diet (Micromedex, et al., and 2017). This study aims at creating an insight of Hyperlipidemia, the uses of Gemfibrozil and the patient’s medical adherence activity.

**Etiology**

 Hyperlipidemia occurs because of a high concentration of the triglycerides, the cholesterol level, or the phospholipids in the blood. One of the causes of the high concentration of the different types of fats is the risk of clogged arteries otherwise known as atherosclerosis.Gemfibrozil is, therefore, significant in helping to reduce the patients’ vulnerability to Coronary Heart Disease, Stroke, and heart attack in patients who suffer from Hyperlipidemia and who have not benefited from the other methods of treatment.

 Studies show that about 12.6 million citizens of the United States of America have the Coronary Heart Disease and 530,000 deaths result from this disorder, yearly (Micromedex, et al., 2017). Additionally, the country spends approximately, 112 billion dollars to treat this disease.

**Pathophysiology**

 The triglycerides, phospholipids, and cholesterol pass through the blood stream as lipoproteins. The lipoproteins are complexes of lipids and proteins. Lesions that result from atherosclerosis occur because of the retention and transportation of the low-density plasma lipoprotein (LDL) via the endothelial layer of the cell and into the extracellular matrix that exists in the sub-endothelial space (Health, Medicine & Anatomy Reference Picture, 2013). Once the LDL reaches the artery wall, the oxidation process and the non-enzymatic glycation modify it chemically.

**Epidemiology**

 About 33.6 million adults who are 20 years old or above this age in the United States of America have a 240 mg/dL level of serum cholesterol or higher. Although the use of drugs that help in the reduction of the lipids have contributed to improving the total cholesterol and low-density lipid level, the increase in obesity in the nation have resulted in the growth of the triglyceride levels in the blood. Thirty three percent of the adults in the United States of America have high levels of triglyceride whereas 69 percent have over 100 mg/dL levels of LDL-C (Low –Density Lipoprotein Cholesterol) in their blood.

 Studies show that the levels of the LDL-C increase with age. At age 50, 23.5 percent, and 28.6 percent of men and women respectively had high levels of LDL-C, whereas 51.4 percent of women and 60.5 percent of men had borderline elevated levels of the LDL-C (Health Anatomy Diagrams, 2017). 13.3 percent of the high levels of cholesterol were present in the fourth-grade children.A report done by the National Health and Nutrition Examination Survey (NHANES) in the years between 1988 and 1994 shows that 10 percent of the adolescents had high cholesterol levels.

**Diagnosis of Hyperlipidemia**

 The Fasting Lipoprotein Profile (FLP) test which entails the measurement of the cholesterol and triglycerides level should be carried out after every five years for individuals who are 20 years or older. In the cases of triglyceride measurement, the fasting of the person for 12 hours or longer is necessary because the levels could get elevated in well-fed individuals (Health, Medicine and Anatomy Reference Picture, 2013). The patient should be on a stable diet and maintain their weight for 1-8 weeks to provide reliable results in the tests.

 When the level of the total cholesterol is measured, and the result is over 200 mg/dL, then there is the need for a second test to verify the first one. If the second test yield’s results that differ from the first by 30mg/dL, then a third test is conducted and the three values compared to come up with the outcome.

**The Dose and Directions of taking Gemfibrozil**

 The FDA (Food and Drug Administration) approves the use of the drug Gemfibrozil for the treatment of types IV and V of Hyperlipidemia. The patient should take 600 mg of the drug twice a day 30 minutes before the meals (Breakfast and Dinner) (Micromedex, et al., 2017). The doctor can also prescribe 900 mg of the drug once a day half an hour before the evening meal if they feel that the patient needs a lower dosage.

 The reason as to why this drug is taken 30 minutes before time is that it is better absorbed when the person is hungry or rather the stomach is empty.Before the patient begins taking the Gemfibrozil doses, they should be able to read and understand the information on the leaflet that exists in the drug pack. The patient should be able to take the medication in accordance with the doctor’s prescription. The patient needs to swallow the tablet as a whole as the taste might not be pleasant when the tablets get broken, or the patient opens the capsules.

**Medical Adherence**

 There cannot be an overemphasis of the need to address the medical adherence since it is one of the greatest challenges faced in the medical field. This assignment gave me the chance to gain experience about this concept by putting me to the test. In this study, I got the Gemfibrozil prescription, which is intended to treat Hyperlipidemia specifically caused by high levels of triglycerides in the blood.

 For this assignment, I identified several factors that hindered my adherence to the dosage of the medicine. These factors include the forgetfulness to take the drugs, the inability to take the dosage in a consistent manner and an improper diet. However, I tried to figure out ways that I could use to overcome these challenges and aid in my adherence. First, I learned that my forgetfulness was because of my busy schedule where I could hardly notice time fly.

 I, therefore, made an effort to take the dosage immediately I remembered, and if it was past the dosage time, then I just skipped taking the drug and waited for the next time. This action was meant to prevent me from taking two doses of the drug in an attempt to make up for the dosage I forgot hence overdosing.

 The second solution to my challenges was making the same meals every day to help me with the consistency of the dosage which I believe significantly increased the effectiveness of the drug as well. Thirdly, I resolved to a well-balanced diet by consuming foods that were low in fats or cholesterol to make sure that I have maximized the effectiveness of Gemfibrozil.

 Also in the study, I was assigned the barrier of visual impairment. Occasionally, I used blindfolds to help me understand the situation better. In the process, I figured that there were several risks associated with this barrier. The risks include taking the wrong medicine in cases where there were other different drugs used to treat other illnesses. In an attempt to curb this risk, I came up with three strategic plans to overcome the barrier.

 First, I requested a family member to help me with the taking of the dosage. In addition, I was expecting them to provide directions so that I could not risk overdosing or taking the wrong drug at the wrong time. Secondly, I made sure that I separated the other medications and put each in a distinct place maintaining the spots for each of the drugs to avoid the mix-up.

 Lastly, I made sure that each of the medications I was taking including Gemfibrozil had Braille writing in their boxes. It is because I could quickly read them and distinguish them from one another. Although it was difficult to carry out this assignment, I was able to gain experience, and now I can easily relate and provide the right patient education to patients with such barriers that can affect medical adherence.

**Side Effects of Gemfibrozil**

 The common side effects associated with the use of Gemfibrozil include stomach upset, nausea, constipation, diarrhea, joint pain, headache, dizziness, drowsiness, mild rush, cold-related symptoms such as sneezing, stuffy nose, and sore throat (Micromedex, et al., 2017). The patient should inform the doctor if they are using other drugs because other medicines can interact with Gemfibrozil and contribute significantly to the severity of the side effects. If the side effects persist, the patient should make a point of visiting the doctor.

**Conclusion**

 Proper medical adherence is core when it comes to the treatment of the Hyperlipidemia. Avoiding things that hinder medical adherence or the effectiveness of the drug such as the consumption of alcohol and foods rich in cholesterol will help in creating positive outcomes in the treatment. The patient should make a point of visiting their doctors immediately if they have severe side effects such as muscle pain or dark-colored urine as the Gemfibrozil could lead to kidney failure in rare cases.

 There are ways that the experience gained in this study will help during the nursing practices. First, it will assist in the providing patient education about the concept of Hyperlipidemia. In addition, they provide education on how to treat it using Gemfibrozil. Secondly, it will aid the nurse in creating an insight to the patient about the symptoms and signs that could pose risks to the patient’s life, and finally, it will help the nurse to make the proper diagnosis and control the disorder.

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