Case Study Week 4

June Arthur

Galen College of Nursing

**Status of The Patient**

**Demographic Data**

Miss Erynne Dellinger, a 24-year-old malnourished and dehydrated white female who tested positive on the ELISA test after being admitted into the ER for complaints of chronic diarrhea and flu like symptoms for past two months. Ms. Dillinger self-treated a cough and runny nose with over-the-counter antihistamines, but her symptoms became worse, now involving leg muscle weakness, causing her the inability to remain standing for any length of time, resulting in missing several days of work from a shipping facility that requires her to stand up to eight hours. Along with these complaints she also has experienced nausea, exhaustion, general body aches, chills and loss of appetite. Thus, she decided to s eek medical treatment.

**Medical History**

Ms. Dillinger’s past medical history is significant for heroin use, with completion of treatment program six months ago, denies use since her discharge. Denies any other medical history, or surgical history. Denies allergies to any medications or latex.

**Current Diagnosis and Treatment**

Ms. Dillinger first suffered from cold-like symptoms including cough and a runny nose, which she treated with OTC antihistamines. She now presents to the ER with chronic diarrhea for past two months, with low-grade fever causing chills, nausea and causing decreased appetite, also malaise, general body aches and muscle weakness in her legs preventing her the ability to stand for any length of time. Ms. Dillinger is suffering from electrolyte imbalances, dehydration, metabolic acidosis, cardiac dysrhythmias, due to chronic diarrhea, decreased nutritional status. Treatment consist Lab drawls of CBC, CMP, Blood cultures, and ABGs. Continuous EKG monitoring done for risk of arrhythmias due possible electrolyte imbalances. Sodium (Na) and potassium (k+) levels are essential for normal cell function. Among the many functions in the body, the regulation of the heartbeat can be effected, therefore we will do EKG monitoring. Also, Na+ and K+ are important to the function of the muscles, and can cause muscle weakness and /or muscle cramping when abnormal. Calcium levels may also be low from the chronic diarrhea. When calcium levels are low it effects the body by an increase in neuromuscular excitability such as positive Trousseau and Chvostek signs, paresthesia, muscle twitching and cramping, tetany, seizure and cardiac dysrhythmias (Copstead & Banasik, 2013). IV LR are ordered to provide hydration and electrolytes since this patient is nauseated and has poor appetite and experiencing chronic diarrhea.

 The ABG are done to check the acid-base imbalances. With the patient having chronic diarrhea and decreased nutritional intake would most likely be suffering from metabolic acidosis. This is caused by loss of too much Sodium Bicarbonate from the body, through the chronic diarrhea (Medline Plus, 2015). This patient is having an elevated respiratory rate(RR) due to the acidosis and her body trying to use respiratory compensation for the metabolic acidosis by hyperventilation.

 Since her history of IV drug use, an Enzyme-linked immunosorbent assay (ELISA) test is done. This is the first line testing for HIV. If positive it will be backed up with a Western blot test and a CD4+T cell count. These tests will confirm the positive result of HIV and give an idea of the status of her immune system or the stage of the HIV disease. The western blot test uses a process called electrophoresis. With this test, there is a 1-2 week wait for the results (Copstead & Banasik, 2013). CD4+T cell a lymphocyte cell that helps coordinate the immune to pathogens. They will interact with antigens, when activated a secretion of cytokines are released, these activate other t-cell and macrophages to the site of invasion of the pathogen. HIV impairs your immune system because it focusses on the CD4 cells. The HIV virus invades the CD4 cell. . The infected CD4 cell proliferates, but the infected cell, also makes more copies of HIV. This leads to fewer HIV-free, working CD4 cells. With fewer healthy CD4 cells, germs and infections have an easy entrance into your body, and are called, opportunistic infections. HIV converts to AIDS when a person CD4+T cell count drops below 200 and the appearance of opportunistic infections (WebMD, n.d.).

 **Nursing Assessment of The Patient**

**Vital Signs**

Ms. Dillinger’s condition when she present to the ER was in the appearance of some distress. Her color was pale and dark circles under her eyes, looked to be malnourished and dehydrated. Her vital signs where, blood pressure 101/64, heartrate 108, respiratory rate 26, and temperature of 99.8.

**Nursing Observations**

Ms. Dillinger may have imbalanced nutrition: less than body requirements related to pale color and dark circles around eyes as evidence by nausea and poor appetite. Knowledge deficit related to newly diagnosis of HIV as evidence by deficiency of knowledge in care of self when sick to prevent opportunistic infections. Risk for activity intolerance related to muscle weakness as evidence by her exhaustion and inability to remain standing for any length of time. She at risk for hypokalemia, hypocalcemia related to loss of electrolytes related to chronic diarrhea evidence by muscle weakness, fatigue She also has the risk for having Metabolic acidosis related to loss of bicarbonate ions with chronic diarrhea evidence by rapid heart rate and respiratory rate. Risk for Deficient fluid volume related to decreased fluid intake and diarrhea. With the new diagnosis of HIV, Risk for infection related to altered immune protection, anxiety related to the new diagnosis and fear, and deficient knowledge about the HIV disease process

 **Current Care Plan and Recommendations**

**Nursing goals and Interventions**

Immediate goals for Ms. Dillinger will be that she not experiences fluid volume deficit, with decreased levels of potassium, calcium, and acid-base imbalance as evidenced by: normal skin tenting, moist mucous membranes, normal B/P readings and heartrate less than 100 and with no orthostatic changes, absence of cardiac arrhythmias, muscle fatigue, headache, nausea. Lab results such as BUN, serum electrolytes, and blood gases within normal range. This will be accomplished by fluid and electrolyte resuscitation**,** Cardiac monitoring**,** administer antidiarrheal medications as ordered, and oral nutrition.

 Long term goals and the new diagnosis of HIVwill be to maintain nutrition for optimal body and cellular functions, Teach Ms. Dillinger the importance of consuming a healthy diet and maintaining adequate fluid intake. Providing dietary consultation referral. To remain free of infections and their complications. Encourage frequent oral care. Teach Ms. Dillinger to avoid exposure to infection and people with known illnesses. Demonstrate knowledge of HIV disease and the measures to prevent transmission to others. Understand the importance of maintaining medication regime. Provide appropriate teaching information about HIV/AIDS. Encourage her to verbalize about her anxiety and use appropriate coping mechanisms. Provide a referral for a psychiatric consult.

 I would recommend her to seek psychosocial support to help in dealing with the changes happening to her and her life. Providing her with information about the disease process and prognosis and treatment, and the importance of medication adherence. I would recommend to get or stay current with the following immunizations; Hepatitis A and B, influenza (not the nasal spray), pneumonia, and the tetanus, diphtheria, pertussis, and to NOT take any live viruses. Exercise is important, it increases your physical strength and endurance. Since Ms. Dillinger is young she needs information on sexual health. She need to know it is important to tell her intimate partner about her HIV status and to know her partner’s HIV status and about any STDs. If her partner is HIV-negative, there are safe activities that can be done (HIV/AIDS Basics, 2017). If she becomes pregnant, she should continue to take her HIV medications regime, this will help in the protection of her unborn baby from the virus. This decreases the chances of the baby seroconverting dramatically. That’s why the do HIV screening on excepting mothers (HIV/AIDS Basics, 2017). She can live a very productive life. HIV, though not curable, is a manageable disease. HIV medications have drastically changed the course of HIV infection, so the sooner you take steps to protect your health, and start treatment with antiretroviral drugs the longer you’ll stay well.

References

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