Diet Instruction on Celiac Disease

1. Description of patient and diagnosis
   1. Melissa Gaines is 36 years old and is 5’3”. She currently weighs 92 lbs and has a UBW of 112 lbs. She reported to have lost tremendous amount of weight. She has been having terrible diarrhea for a while now and does not have the energy to get off the couch. She has history of GI problems on her mom’s side. She has been relying on chicken noodle soup, crackers and sprite for the past few days. She has a college degree and works as a secretary for a hospital administrator but just gave birth 3 months ago so she was on maternity leave.
2. Discussion of the disease
   1. Etiology
      1. Celiac disease is an autoimmune condition, which affects an individual for life once there is an onset. Known as gluten-sensitive enteropathy, which is condition where a person’s immune system makes antibodies to gluten. AGA is Anti-Gliadin antibodies, which is part of the gluten protein found in wheat (similar proteins are found in rye, barley, and oats). AGA is an autoantibody directed against the gliadin portion. EMA is Anti-Endomysial Antibodies. Endomysium is the thin [connective tissue](http://labtestsonline.org/glossary/connective/) layer that covers individual muscle fibers. Anti-Endomysial antibodies are developed due to the ongoing damage to the intestinal lining. If a person has a family member who has a diagnosis of celiac disease they have a one in four chance of also having celiac disease. Many cases remain undiagnosed because symptoms mimic many other gastrointestinal conditions. Only about 3 percent of people who have celiac disease have been diagnosed. There can be an onset at birth, after surgery, during pregnancy or after infection of any serious trauma.
   2. Diagnostic Measures
   * 24-hour stool analysis (100-g fat diet x 3 days) is one way of determining celiac disease.The fecal fat test measures the amount of fat you eliminate in your stool. This test shows your doctor if you are digesting or absorbing fat properly. Poor digestion of fat is called fat malabsorption. Blood tests are another way of determining the gluten intolerance. Transglutaminase antibody (tTG), IgA class is the primary test ordered to screen for celiac disease. If the anti-tTG, IgA or IgG test is positive, then the test can also be used to monitor a person with celiac disease and to help evaluate the effectiveness of treatment; antibody levels should fall when gluten is removed from the diet. Also, collecting a sample of small intestine for testing check for damage to the villi. To do this, your doctor inserts a thin, flexible tube (endoscope) through your mouth, esophagus and stomach into your small intestine and takes a sample of intestinal tissue to examine under a microscope. The last common tests are CBC, ESR, CRP, WBC, and CMP tests. CBX is complete blood count to look for anemia and

WBC. ESR is erythrocyte sedimentation rate to evaluate inflammation. CRP is c-reactive protein to evaluate inflammation. CRMP is comprehensive metabolic panel to determine the electrolyte, protein, and calcium levels and to verify the status of the kidney and liver.

* 1. Treatment
     1. Medical, surgical and or psychological treatment
        1. There are a few medications that are recommended to help treat celiac disease. Steroids and immune suppressants are used to control intestinal swelling and malabsorption in extreme cases. Vitamin supplements are also suggested to help aid celiac disease. Vitamin B12 is the most common because the last part of the small intestine also absorbs vitamin B12, and untreated celiac disease patients often have deficiencies in this vitamin as well as folate. Vitamin B12 deficiency causes diarrhea and/or constipation, fatigue and loss of appetite, and can lead to more serious neurological symptoms, such as confusion and even depression. Treatment for this condition is non-surgical.
     2. Medical Nutrition Therapy
        1. Gluten free diet is the best way to treat celiac disease. This means not to consume anything containing wheat, rye or barley. Words such a starch, flavoring, emulsifier, hydrolyser, plant protein often mean wheat protein is involved. Corn, potato, rice, soybean, tapioca, arrowroot, carob, buckwheat, millet, amaranth and quinoa are allowed and good carbohydrate sources. Another thing to be aware of is cross contamination. For example oats, the factories that produce and pack the oats may have cross contamination and therefore cause flair ups. Alcohol is another item to be aware of. Wines and hard liquor/distilled beverages are gluten free. Beers, ales and malt vinegars that are made from gluten containing gains are not distilled and therefore are not gluten free.
     3. Prognosis
        1. Education will be an important part of recovery. The patient should be educated on gluten free items and possibly avoiding lactose to make sure they do not have lactose intolerance. With a gluten-free diet regeneration of new epithelial cells in the gut will take place and within 2 years the intestine will be healed. After avoiding gluten, villous height generally returns to normal. It allows food to be properly absorbed, problems of diarrhea to decrease and able to gain weight back. If the patient does not stay on gluten-free diet, there are increases chanced of developing cancer of the intestine. Osteoporosis is may also develop because of poor calcium absorption. Untreated pregnant woman have higher than normal rates of miscarriage and babies born with birth defects, especially neural tube defects, which arise from inadequate amounts of folic acid.

1. Instruction Materials

See Attached Sheet.

1. References

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