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Writing Assignment #4

 Celiac disease is an autoimmune disorder that affects a small amount of the general population. Individuals with celiac disease experience inflammation of the small intestine due to the ingestion of gluten. Gluten is the protein found in wheat and similar types of grains. There are classic symptoms individuals with celiac disease may experience such as: diarrhea, weight loss, malnutrition, fatigue, altered bowel movements, anemia, osteoporosis, or other autoimmune diseases. Individuals who have celiac disease typically get diagnosed by observing their levels if serum autoantibodies to transglutaminase 2. An individual with celiac disease would have elevated levels of serum antibodies to transglutaminase 2, while individuals who do not have celiac disease would have normal levels. Currently there is not a cure or medication that prevents the effects of celiac disease. Individuals diagnosed with this autoimmune disease must adhere to a strict diet that cancels out anything with wheat/gluten. While many individuals with celiac disease may not adhere to a strict diet to prevent their symptoms, other individuals who do adhere to a strict diet may still experience symptoms of the autoimmune disease. Due to the fact that there is no medical cure for celiac disease, and the only dietary solution is not without fault, a solution for celiac disease is very crucial. Scientists have begun doing trials with an oral transglutaminase 2 inhibitor to see if the inhibitor would decrease the effects of celiac disease in the small intestine. The trial consisted of adults with well-controlled celiac disease, and the adults must have received a biopsy diagnosis of celiac disease at least twelve months before the trial. When putting together the trial patients, the adults must be between the ages of eighteen to sixty-five years in age. The adult’s biopsies must have shown positive for HLA-DQ2 or HLA-DQ8 genotypes. In addition, the trial patients must also have been adhering to a strict gluten free diet for a minimum of twelve months before the trial. The trial required the patients to ingest three grams of gluten each day for the span of six weeks. This means that the patients had to agree to possible experience constant celiac disease symptoms and pain for six weeks. The trial was double-blind and placebo controlled. However, the safety of the trial patients was closely observed and evaluated by monitoring the patient’s vital signs, weight, laboratory tests results, and side effects from the autoimmune disease. The trial patients were required to participate in upper gastrointestinal endoscopies and duodenal biopsies in the beginning and end of the trial to observe the results of the trial. The trial was observing the attenuation of mucosal damage due to gluten. Scientists used a ratio of villus height to crypt depth to measure the amount of mucosal damage present after ingestion of gluten. After assessing the results of the trial, scientists found that the transglutaminase 2 inhibitor reduced the mucosal damage due to the ingestion of gluten overall. It was found that adults who used the transglutaminase 2 oral inhibitor may see an improvement in overall quality of life and observe improvement of celiac disease symptoms.

Works Cited

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