

# Aviation security case analysis essay sample

[Law](#), [Security](#)



Zachary's Story is about a 12-year old boy who has been in and out of the hospital twelve times in the last two years. When Zach first started getting stomach aches, his mother, Sandra, thought it was just something he had eaten or maybe even the flu. Zach's pain continued to increase; when he used the bathroom it was almost exclusively diarrhea, it smelled horrible, and he said it was painful. Zachary was vomiting blood, blood in the toilet, passing out during school, high fevers, and not eating. He would wake up at night crying from the pain. (Jenkins, 2013) He has seen a number of eight different doctors, and none of them knows exactly what is wrong with him, they only told him that it was probably an ulcer. An ulcer starts by eroding the mucosa of the G. I. tract wall. Absorption would not happen correctly, some of the ingested and secreted may seep out of the lumen. This also could create a pathway of entry for pathogens if the ulcer ate through to the muscularis mucosa and also lose some control of defecation.

This is why Zachary may be bleeding when he uses the bathroom. If the ulcer eats a hole into the wall of the stomach, bacteria and partially digested food can spill through the opening into the peritoneum causing severe inflammation of the abdominopelvic cavity and the visceral peritoneum, which covers some of the organs (Jenkins&Tortora pg. 825, 856) Zachary's stomach contributes to the formation of ulcers in other parts of the G. I. tract by the acids needed to breakdown food are excessive and causes the stomach to over work therefore causing surrounding parts to be over worked as well. If the stomach is always churning food the digestion processes is always on going. Parietal cells and gastric glands are directly related to the formation of ulcers. A major causing factor is chronic inflammation due to

*Helicobacter pylori* that colonizes the mucosa. (Jenkins, 2013) The immune system is unable to clear the infection, despite the appearance of antibodies. Thus, the bacterium can cause a chronic active gastritis.

Zach's G. I. tract needs the substance that contributes to the formation of ulcers to assist in the breakdown of food and for absorption. Epithelial cells extend into the lamina where they form secretory folds called gastric glands. Several of these glands open into the gastric pits and secretions from these glands flow into the pits. (Jenkins, 2013) Zach's only normal digestive enzymes come from his mouth, so starches are something that Zach may be able to digest. Finally Dr. Lee received results from Zachary's scans back and wanted to sit down with Sandra to go over them. Mr. Lee sits Sandra down and tells her this, " Mrs. Lewis, Zachary has a very inflamed appendix that we need to take out immediately. I know that appendicitis does not explain all of the things that are happening to your son. I believe it is something else entirely, which we can confirm when we go in to take out his appendix." (Jenkins, 2013)

Dr. Lee believes that Zachary has Crohn's disease. After getting the results back from the CT, Dr. Lee found some inflammation of the bowel where the appendix is attached. Dr. Lee tells Sandra that he ordered an MRI of Zach's abdominal cavity and he found there is some pretty heavy inflammation of large sections of his small intestines. " Mrs. Lewis, inflammation aside, there is something else on these scans that concern me. There is inflammation surrounding an opening in the walls of the small intestine where digestive juices made in the liver and pancreas enter, and this inflammation may be

causing blockage of the opening. These juices contain enzymes that break down the food Zachary eats into a form his body can absorb. Without them, even though Zachary eats food, his body is breaking down because he is not getting enough nutrients”, explains Dr. Lee to Sandra about his feedback on Zachary’s results. (Jenkins, 2013)

Zachary will most likely struggle with these symptoms throughout his entire life. So therefore, malnutrition and malabsorption caused by the inflammation are not the only complications Zachary may face. He has already experienced fatigue, nausea, pain, fever and weight loss, but he should also prepare for the possibility of skin, liver and eye problems. Thankfully Zach didn’t need surgery. His hepatopancreatic ampulla was partially blocked by inflammation and was causing malabsorption and prevention of efficient digestion, which led to severe abdominal discomfort and diarrhea. (Jenkins, 2013)

The doctor said his diet and nutrition must be carefully monitored for the rest of his life. Dr. Lee explains, “ Crohn’s disease is a chronic inflammatory disease affecting the bowels. Food high in fiber and fats has to be limited or not ingested at all, and foods that cause an increase in gas production must be avoided as well.” Zachary’s immune system may be attacking the cells of his intestines, causing inflammation and his symptoms. There is no known cure for Crohn’s disease. Zach may have to take a regiment of immunosuppressant and anti-inflammatory drugs to manage his inflammatory reactions. Zach is feeling much better now and actually sleeps through the night almost every night. (Jenkins, 2013)

### Works Cited

Jenkins, G. W. (2013). *Anatomy and Physiology from science to life*. John Wiley & Sons., pg. 822-878