Case Report: Final Diagnosis

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This case study was about an outbreak at a local college. Students were coming in with a variety of symptoms including fever, fatigue, sore throat, and headaches. The college biology lab ran test results as well as a molecular lab, which showed several different diagnoses for the students who came in to the infirmary. An ELISA test was run on those who showed the potential of having meningitis.

 Sue Smith had symptoms of headache, extreme fatigue, and high fever. Samples of her fluid were taken and ran through an ELISA test, which showed how many antigens were within her spinal fluid. The results showed that she had a 500 ng/mL concentration of Bacterial Meningitis, which she most likely contracted from the college she visited the previous weekend. Her treatment would be antibiotics and plenty of rest and fluids.

 Jill had symptoms of extreme fatigue, soreness, and slight fever. Jill had her fluids run through an ELISA test to see how many antigens were within her spinal fluid, and the results showed a 125 ng/mL concentration of Bacterial Meningitis. She most likely contracted the disease from Jill, who is her soccer team mate and roommate. Her treatment would be antibiotics and plenty of rest and fluids.

 Maria had symptoms of fatigue and extreme fever. An ELISA test was run on her fluids to see how many antigens were within his spinal fluid. The results were a 25 ng/mL concentration of Bacterial Meningitis. She most likely contracted it from Jill, because she drinks after Jill and is exposed to Jill and Sue for long periods of time. Her treatment would be antibiotics with plenty of fluids and rest.

 Marco had symptoms of fatigue and headaches. He had an ELISA test run on his fluids to see how many antigens were within his spinal fluid. It resulted in a 10 ng/mL concentration of Bacterial Meningitis. He most likely contracted it from Sue because they are lab partners and they share food. His treatment would be antibiotics and plenty of rest and fluids.

 Anthony had symptoms of dry cough, fatigue, sinus issues, and a fever. The general lab and molecular lab tests came back with a sequence of data that was then analyzed to find what known nucleotides it matched. It resulted in the Influenza B virus, which he most likely got from running outside in the cold, through the woods between sports games. Treatment for the flu is over the counter cold medications to help with the symptoms, cough drops, and plenty of rest and fluids.

 Wanda had symptoms of a fever, sore throat, and swollen glands. The general and molecular lab tests came back with a sequence of data that was then analyzed to find what known nucleotides it matched. It resulted in the Epstein-Barr virus, also called mono. She most likely got mono from her boyfriend Ray, who was reported to have identical symptoms. Mono is diagnosed through a blood test for confirmation, and the treatment is plenty of rest. She can gargle with salt water or use throat lozenges for her sore throat, take Advil or Tylenol for fever, and she should avoid contact sports and heavy lifting because mono causes the spleen to swell, and it can burst.

 Maggie had symptoms of scratchy, firey throat, heaviness in her head, and uneven temperature. The general lab and molecular lab return a sequence of data that was then analyzed to find what known nucleotides it matched. The results came back confirming streptococcus. Strep throat is treated with antibiotics and lots of rest. She should not smoke or drink.

 Arnie had symptoms of cough, runny nose, and fever. The general and molecular lab test results came back with a sequence of data that was then analyzed to find what known nucleotides it matched. It confirmed influenza B virus, which he most likely got from Anthony, who has been helping him with the school newspaper. Treatment for the flu would be over-the-counter cold medication to relieve the symptoms, cough drops, and plenty of rest and fluids.

 Alvin had symptoms of headaches and sore throat. He requested not to be tested. He was noticed sharing a drink with Wanda, which means he may likely have mono also. He would be diagnosed through a blood test for confirmation, and the treatment is plenty of rest. He can gargle with salt water or use throat lozenges for his sore throat, take Advil or Tylenol for fever, and he should avoid contact sports and heavy lifting because mono causes the spleen to swell, and it can burst.

 The campus faculty should make sure all students receive flu shots and are up to date on their meningitis vaccines. All students are recommended to wash their hands frequently and do not spend much time with people who are sick, if it can be helped. Students should get plenty of sleep and eat/drink healthy to keep their immune systems strong. It is highly recommended for students to not share any food or drinks with anyone. This prevention advice is strongly recommended for students who live in the dorms, because they are at higher risk. Faculty should also get flu shots, and custodians need to clean the bathrooms more often (shared areas for spreading germs).