Post Mortem Dissection: Effects of Chronic Diseases on the Body

The cadaver that we studied was an 87 year old female. From her death certificate, we learned that she suffered from Coronary Artery disease, osteoarthritis, and Myasthenia Gravis. Through our dissection, we learned that she had open heart surgery (potentially multiple heart surgeries), left total knee replacement, and a hysterectomy. We also discovered that her abdominal and pulmonary thoracic organs had shifted to the left likely due to being immobile. Her cause of death was a pulmonary embolism. This study was performed to see the effects of chronic diseases on the body.

The experimental protocol was set up to resemble an autopsy that would be done at any other facility, to the best of our knowledge. To begin, we first observed the external structure to look for any marks, bruises, gross abnormalities and tears. In the Abdominal cavity, we examined and removed the liver, gallbladder, and right kidney. We found an abdominal aortic aneurysm, also. We observed the rest of the abdominal organs. We then proceeded into the thoracic cavity. We separated the major muscles, including pectoralis major and minor. Prior to removal, we examined the rib cage, lungs, and heart. Then we proceeded to examine the major blood vessels, trachea, and esophagus. We proceeded to dissect into the cranial cavity to examine and remove the brain. Lastly, we separated the remaining muscles of the arms, legs, and abdomen.

During the external examination, we noticed skin tearing, a moon face, and plaque buildup on the epidermis. When we opened the abdominal cavity, we found an inch of subcutaneous adipose tissue in the thoracic and abdominal regions. There were large amounts of visceral adipose tissue found in the abdominal cavity. The thoracic and abdominal organs were heavily covered in visceral adipose tissue. Upon removal of visceral adipose tissue, we discovered that all the thoracic and abdominal organs had shifted severely to the left. Additionally, the cadaver’s abdominal muscles were greatly thinned as a result of the Myasthenia Gravis. The cadaver had a pulmonary embolism in her left lung which we found in the left pulmonary artery. There were staples in the sternum of the rib cage, indicating she had open heart surgery. We found a stent in the left coronary artery. In her extremities, we found two joint replacements (left knee and right shoulder).

From the large amounts of adipose tissue, coronary stent, abdominal aortic aneurysm, and joint replacements, we can determine the cadaver did not live a healthy lifestyle. When we dissected the thoracic cavity, we found atherosclerosis. The atherosclerosis causes the abdominal aortic aneurysm and coronary stent because the hardening decreases blood flow back to the heart. When we dissected into the abdominal and thoracic cavities, we were surprised to see the severe shifting of all organs to the left. All of the adipose tissue and organ shifting leads us to determine she was a sedentary person. The organ shifting shows her weak muscles that did not allow her to stay in good posture. The adipose tissue is from being sedentary and eating an unhealthy diet. The joint replacements and the quantity of adipose tissue were likely related to her osteoarthritis. The osteoarthritis is due to low calcium intake and weak bones. If the cadaver had been more active, her bones and muscles would have been stronger. When the muscles are contracted, the pull on the bones by the tendons strengthens the bones. All of the excess weight she was carrying on her midsection was pressing down on her bones and wearing them away. If she would have been more active to build strong, healthy bones, she could have avoided joint replacement surgeries, excess weight, and osteoarthritis. Adding in a balanced, healthy diet helps to avoid the excess weight, atherosclerosis, coronary stent, abdominal aortic aneurysm, osteoarthritis, and weak muscles.