MRAD 281 Computed Tomography Theory 2 Reflection #1 – forms part of assignment #1 (10%)

Reflection: Reflection on CT Scanning of the Head

Reflections are designed to encourage you to think critically about your experiences, apply theoretical knowledge to practical situations, and develop your professional identity as a medical imaging technologist.

Topic: Reflecting on CT Scanning of the Head

As you learn about CT scanning of the head, reflect on your understanding of this important diagnostic procedure. Consider the following questions:

1. Describe the basic process of a CT head scan as you understand it. What are the key steps involved, from patient preparation to image acquisition?
2. How has your understanding of CT head scanning enhanced your overall comprehension of neuroanatomy? Provide an example of how this imaging modality has clarified or reinforced your knowledge of brain structures.

The process of a head CT scan starts with proper patient preparation and positioning. Before starting, the technologist confirms the patient's ID, history, and reason for the examination. Any health or safety concerns, such as pregnancy or the use of contrast, should also be addressed. For a head CT, the patient is positioned supine on the table, head first, with their head securely placed in the head holder to reduce movement. Any motion or rotation can affect image quality, so proper positioning is important. A scout image is obtained first to plan the scan range, followed by axial image acquisition through the head. Depending on the clinical indication, the examination can be performed with or without IV contrast. For example, a non-contrast CT head can be performed when looking for an acute hemorrhage. The images can then be reconstructed into different planes for further evaluation. Learning CT head scanning has improved my understanding of neuroanatomy by helping me visualize and understand brain structures and their functions. It has also helped me understand cross-sectional anatomy because I can imagine the structures in different planes and in 3D. Before learning CT anatomy, I found it difficult to remember and understand where structures were located in relation to each other. Also during work I would ask questions about CT towards xray techs that knew CT and they would show me the importance of each landmarks is and seeing how CT images are reconstructed helps. Being able to look at axial CT images has helped me understand how the ventricles are positioned in relation to one another and where cerebrospinal fluid is located. Overall, CT has helped me connect the anatomy I have learned in class with how it appears in different planes and perspectives. Once I begin my CT rotation and have the opportunity to see real patient examinations and pathology, I believe it will further reinforce my understanding of CT and neuroanatomy.

Word count: 250-350 words

Reflective Writing Rubric

Criteria	1 Point	2 Points	3 Points

Critical Reflection	Basic understanding of topic	Some reflection, with basic analysis	Deep reflection with thoughtful analysis
Application to Practice	Limited connection to medical imaging practice	Clear connections to medical imaging practice	Insightful application to medical imaging practice
Writing Quality	Basic writing with some clarity issues	Clear writing with minor errors	Well-written, clear, and concise