Radiologic sciences

A radiographer or a ‘ radiologic technologist’ is a healthcare professional who takes X-ray images of various important parts of the body and also conducts other specialized radiological procedures such as CT scans, MRI scans, nuclear medicine techniques and ultrasound. It is the ethical duty of the radiographer to protect the patient from radiation by ensuring proper radiographic technique, proper positioning and the use of standardized radiographic equipment. Besides, the processing procedures of the X-ray films should be standardized in order to reduce the need to have repetitive image taking for the patient (ASRT, 2007).

It is the duty of the radiographer to explain the details of the procedure to the patient, along with the benefits and the risk. This is a part of the informed consent process, to ensure that the patient can make an informed decision and is free to choose the options available. It is the duty of the radiographer to ensure that all the doubts regarding the process are cleared. Before the procedure is actually conducted, the radiographer has to ensure that the patient is not pregnant or likely to be pregnant and in case of invasive radiographic procedures, the patient is not allergic to any contrast agent utilized.

This is to make certain patient safety and reduce the chances of ill effects. If the radiographer does not take adequate amount of precaution and if the patient suffers damage, the radiographer could be help negligent. The radiographer should also have the knowledge of human anatomy and landmarks of various structures in the body so that the X-ray device and the X-ray film can be positioned properly and the images, which are obtained,

are of high quality. During preparing the patients for invasive procedure, the radiographer can also administer the contrast medium.

Hence, they should have an idea of injection techniques and handling the side effects that may develop following administration of the contrast medium. The radiographer should ensure that the X-rays are handed out to the radiologist on time (ASRT, 2007). A trained radiographer should ensure certain ethical duties. It is the duty of the radiographer to inform the patients of the entire process of X-ray taking, and the benefits and risks of the procedure. A qualified radiographer would help reduce the dose of radiation to the patient, prevent pregnant women from suffering from the ill effects of radiation and also reduce the risk of cancer.

Besides, it is the duty of the radiographer to bring out X-rays of optimum quality, through proper X-ray taking and processing procedures. An X-ray with proper quality would be able to demonstrate even the fine details and help the radiologist to diagnose the disorder. This would help to treat the disorder promptly and thus help prevent unnecessary sufferings to the patient. A radiographer should make an enquiry of the pregnancy status of the women in order to remove any doubts that the woman is pregnant. The menstrual cycle status would help to determine if the woman is pregnant or not.

For certain procedures such as X-ray of the skull, chest and the extremities, the radiographer should make sure that the women’s lower abdomen is unnecessarily not exposed to radiation, even tough she may not be pregnant. Using the right equipment, technique and body shields can help to

reduce risk. The radiation dosage utilized should be optimum such that it would not interfere with the development of the fetus. Sometimes, the radiographer may take adequate amount of precautions in order to establish pregnancy, and he/she may be sufficiently satisfied that the women is not pregnant.

However, after going ahead with the X-ray procedure he/she realizes that the women is pregnant, then the amount of radiation administered and the part of the body it is administered to helps to determine if an MTP is required or not. If the dosage administered is between 100 to 500 mGy, then an MTP may be required. The radiographer may be held negligent if he does not make an attempt to determine the pregnancy status and goes ahead with the procedure (ASRT, 2007 & IAEA, 2006).