

Quality Assurance in Cardiac Disorder Detection Images

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Abstract : In the article, Image processing techniques have been applied on cardiac images for enhancing the image quality. Two types of methodologies considers for survey, invasive techniques and non-invasive techniques. Different image processes for improvement of cardiac image quality and reduce the amount of radiation exposure for invasive techniques are explored. Different image processing algorithms for enhancing the noninvasive cardiac image qualities are described. Beside these two methodologies, third methodology has applied on live streaming of heart rate on ECG window for extracting necessary information, removing noise and enhancing quality. Sensitivity analyses have been carried out to investigate the impacts of cardiac images for diagnosis of cardiac arteries disease and how the enhancement on images will help the cardiologist to diagnoses disease. The paper evaluates strengths and weaknesses of different techniques applied for improved the image quality and draw a conclusion. Some specific limitations must be considered for whole survey, like the patient heart beat must be 70-75 beats/minute while doing the angiography, similarly patient weight and exposure radiation amount has some limitation.

Keywords : cardiac images, CT angiography, critical analysis, exposure radiation, invasive techniques, non-invasive techniques

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