Discussion, Conclusion and Recommendation

Chapter five

Discussion, Conclusion and Recommendation

5.1 Discussion:

This study was perform in Khartoum state , to evaluation image quality in CT scan using deferent MSCT Detectors 64slics and 8 slices scanner ,to compare the quality ,noise and artifact of image by this scan .

The study showed that 64 slice produce image better in overall quality with percent for abdomen image is 60%high, 23.33% v.good, 13.33 %good and 10% is acceptable. While the 8 slice perform is 16.66% high, 13.33 % v.good, 56.66% good and 30% acceptable.

For brain image is 63.33%high, 20 % v.good, 13.33 %good and 6% is acceptable for 64 slices. While the 8 slices perform is 13.33% high, 6.66 % v.good, 66.66% good and 23% acceptable.

Also the study showed that 64 slice produce bad in image noise with percent for abdomen image is 3.33%high, 10% v.good, 33.33 %good and 53.33% is acceptable. While the 8 slice perform is 0% high, 33.33 % v.good, 50% good and 16.67% acceptable.

For brain image is 0%high, 16.67 % v.good, 33.33 %good and 50% is acceptable for 64 slices. While the 8 slices perform is 3.33% high, 66.66 % v.good, 23.33% good and 10 acceptable.

The artifact also was observed in this study with percent for abdomen image is o %high, 3.33% v.good, 20 %good and 76.67% is acceptable. While the 8 slice perform is 0% high, 26.67 % v.good, 66.67% good and 6.67% acceptable.

And for brain image is 0%high, 6.67 % v.good, 33.33 %good and 60% is acceptable for 64 slices. While the 8 slices perform is 0% high, 33.33 % v.good, 60% good and 6.66 acceptable

5.2 Conclusion:

High CT image quality is important to diagnostic, in CT scan there is many factor affect in the image quality (software, thickness) .

The 64 slices CT scan is able to give the physician a better view of size, shape and position of soft tissue structures. But all 64 slices is more expensive and patient may received high radiation.

In this study we found that image produce by 64 slices it has high quality compare to 8 slices scanner. But it has high noise and artifact compared than 8 slices; this may be due to reformat of the image with thin slices.

5.3 Recommendation:

- The 64 slices is a better device in image diagnostic but the cost is so high for patient and the patient may receive high radiation, better use 8 slices.
- 64 slice use for very ill patient who cannot hold still.
- Future study to make objectives measurements the richer shod conduct on phantom.