

Effectiveness of Computed Tomography Scans for Management of Patients with Chronic Headache

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Chronic headache is one of the most common disorders experienced by patients and it is the most common symptom among the patients who are referred by the physicians for Computed Tomography (CT) scan of brain. This study was performed using CT head scan data and scan reports. Those data were related to the patients who had undergone CT brain scans during the period of January- 2015 to May- 2017. Socio demographic data, medical history and the final comments of CT scan given by radiologists were collected, recorded and analyzed. Dose Length product (DLP) values of the CT scans were also collected to calculate the effective dose to the patients. 850 patients were selected out of 1577 and there were 8 patients (0.94%) who were positive for major malignant findings. 50 patients were positive (5.8%) for significant neurosurgical findings. 321 (37.76%) patients were positive for clinically non-significant findings and among those patients 296 (34.82%) patients were positive for sinusitis. There were 471 patients (55.41%) with no abnormality found in their CT scans. All positive scans except the sinusitis were considered as effective scans and there were only 83 (10%) effective scans and 767 (90%) non-effective scans. The average DLP of those CT scans was recorded as 1580.34 mGy cm and calculated average effective dose was 3.6 mSv. CT head scan imaging performed for the management of chronic headache patients was found to be clinically less significant for positive findings. The effectiveness of CT scans to manage chronic headache patients is very low and cost effectiveness of those scans is also lacking. Patients being exposed to high radiation doses can be limited by judicious requests for CT scans by establishing a local clinical practice guideline for decision making regarding the CT scan imaging.

Keywords: Chronic headache, Computed tomography, Dose length product (DLP), Effective dose