

Study on Radiological Changes of the Aging Brain and Skull Using Computed Tomography

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The physical appearance of humans changes according to the age. Every change may not be noticeable to naked eye, but it is possible to determine the microstructural changes of the brain and skull using novel quantitative techniques. The last few decades showed significant technical advancement in imaging modalities and most importantly computed tomography (CT) plays a major role among them. CT is superior in detecting morphological changes of skull and bone when compared with MRI. The main objective was to determine the relationship between selected measurements of brain and skull with age. Specific objective of this study was to see the relationship of the selected measurements with gender. This study consists of CT head images of 180 patients between the ages of 20 years to 80 years. In addition to direct measurements frontal horn index, Evan index, ventricular index and Huckman number were calculated. The measurement of the Evan index was found to be useful to determine the age of a person. The measurement of distance between the choroid plexuses, the measurement of the greatest external diameter of the frontal bone and maximum internal width of skull display the most significant changing parameter with gender.

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