

Original Paper

A comparative study between CT-scan and pathological finding in tumors, and other lesions in brain

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Abstract

Background and Objective: Brain computed-tomography (CT) scan has a well documented accuracy in detecting the tumors; this study was carried out to assess the conformity and correlation of CT-Scan diagnosis of the brain tumors with pathological findings in Ghaem Hospital Mashad University of Medical Sciences-Iran.

Materials and Methods: This descriptive prospective study was done on 75 patients, 5-83 years, with the clinical suspicion of brain tumors. According to the CT-Scan findings 1-3 differential diagnosis were made for each patient. This was followed by surgery and biopsy, and the CT-Scan diagnoses were compared with pathological findings.

Results: The best conformity and correlation of radiologic and pathologic diagnosis was seen in pituitary adenoma, acoustic neuroma, epidermoid cyst and craniopharyngioma. Also, according to the CT-Scan findings, the highest degree of sensitivity, specificity, positive predictive value and negative predictive value, were related to pituitary adenoma, high grade astrocytoma and meningioma.

Conclusion: This study showed that no single imaging modality may claim optimal sensitivity or specificity for the assessment of CNS disorders, although several imaging methods carry independent and complementary information, and CT-scan has different ability for diagnosis of different kind of tumors.

Key Words: Brain tumors, CT-scan, Scan pathology, Pituitary adenoma, Astrocytoma, Meningioma

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