

To determine the ability of diffusion-weight MRI images and ADC (apparent diffusion coefficient) to differentiate brain tumors from brain abscess which are difficult to distinguish on conventional MRI technique. From May 2015 to March 2017, prospectively studied 50 patients (age range 20 to 85 years, mean age 55 years) with diagnosis clinically brain tumor or abscess. A conventional MRI was done on Philips MRI a 1.5T using T2, T1 and fat-suppressed technique and echo-planar spin-echo sequence diffusion weight and ADC is carried for all patients. All MR imaging features were categorized brain lesion as brain tumor or abscess, according to the features of imaging which were compared the result with histopathological findings. Fifty patients, 29 male and 21 female the diagnosis was confirmed with pathological findings which included Primary malignant cystic brain tumors 10(20%) Primary benign cystic brain tumor 13 (26%), Metastatic tumor 16 (32%) and abscess 11 (22%). The sensitivity for diagnosis abscess in DWI are 100%, for diagnosis primary malignant cystic tumor 60%, Primary benign cystic brain tumor 100% and the sensitivity of DWI for diagnosis metastasis tumor 81%. Diffusion-weight MRI and ADC is good modality for differentiation cystic necrotic tumor from brain abscess.