

Calculating Ventricle's Area Based on Clinical Dementia Rating Values on Coronal MRI Image

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Abstract : Alzheimer is one type of disease in the elderly that may occur in the world. The severity of the Alzheimer can be measured using a scale called Clinical Dementia Rating (CDR) based on a doctor's diagnosis of the patient's condition. Currently, diagnosis of Alzheimer often uses MRI machine, to know the condition of part of the brain called Hippocampus and Ventricle. MRI image itself consists of 3 slices, namely Coronal, Sagittal and Axial. In this paper, we discussed the measurement of the area of the ventricle especially in the Coronal slice based on the severity level referring to the CDR value. We use Active Contour method to segment the ventricle's region, therefore that ventricle's area can be calculated automatically. The results show that this method can be used for further development in the automatic diagnosis of Alzheimer.

Keywords : Alzheimer, CDR, coronal, ventricle, active contour

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