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Unsupervised Corpus Callo FLAIR MR

1st Evan Kusuma Susanto
Department of Informatics
Institut Teknologi Sepuluh Nopember
Surabaya, Indonesia
evan.19051@mhs.its.ac.id

2nd Junaic
Department of Inj
Institut Teknologi Sepu
Surabaya, Indo
neutrofoton@gn

4th Riyanarto Sarno
Department of Informatics
Institut Teknologi Sepuluh Nopember
Surabaya, Indonesia
riyanarto@if.its.ac.id

Abstract— Many algorithms and methods have been published regarding Corpus Callosum extraction from MRI images. However, all of these approaches use T1-weighted images or existing human brain atlas as their basis. We propose a new algorithm that can work with T2-FLAIR image. The basis of our method is from the observation that corpus callosum is located directly above a cavity inside the brain in almost every MRI images. We highlight the corpus callosum by first extracting the cavity inside the brain and then performing a morphological dilation upwards to get the rough location of the corpus callosum. Our evaluation shows that this method achieves an average of 76.90% in DSC when used to extract corpus callosum from 30 different images and 3 different subjects.

Keywords— Image segmentation, Corpus callosum, Brain