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Poster Presentation

The Study about MRI Images of Encephalitis and Diagnosis by Using the Software Ways

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Abstract

Introduction: Encephalitis is inflammation of the brain. Viral infections are the most common cause of the condition .Encephalitis can cause flu-like symptoms, such as a fever or severe headache. It can also cause confused thinking, seizures, or problems with senses or movement. However, many cases of encephalitis result in only mild flu-like symptoms or even no symptoms. It's important to get a timely diagnosis and treatment. A CT-scan may be useful in detecting changes in brain structure. It can also rule out other causes, such as stroke, an aneurysm, or a tumor. However, an MRI is the best imaging option for encephalitis; it can identify the classic brain changes that suggest encephalitis .The purpose of this study was to design and introduce a diagnostic software for encephalitis lesions in MRI images. **Materials and Methods:** This research was a software designing study that many MRI images that used in the past articles were analyzed with the software designer. The designed software was in MATLAB. In this study, we used image processing techniques such as; noise removing, edge denotation, separate of area with high density and contrast increasing for analysis. Based on the evidences from this analysis, radiologist could have the best diagnosis of the lesions. The results of all lesion diagnostics were analyzed and compared in the pathologist's report. **Results:** Designed software enables the present MRI images analyzes them pixel by pixel. This software in addition evaluates the areas of lesions and shown them without viewer diagnosis completely. Final results of diagnostic software analysis showed high sensitivity. **Conclusion:** Contemporary assessments of morphologic and physiologic traits of lesions by a computer aided diagnostic software can improve the radiologist's precision and decrease reading time of bulk images of MRI. Using this software to increase the accuracy of the lesions detection is suggested.

Keywords: MATLAB software, MRI images, Encephalitis

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