

ABSTRACT

Store and forward teledermatology as the aspect of telemedicine increases rapidly due to a very fast development of multimedia, digital image processing, information system, and telecommunication. In order to implement teledermatology, many tools will be needed. One of the tools is counting the number of lesions, the area dan the percentage of lesions of Scabies diseases (called quantitative analysis) automatically. It is much needed because many people in rural area suffered from Scabies diseases did not get a medical analysis because of lack of dermatologist.

To overcome this situation, in this final project we make an automatic quantitative analysis of Scabies disease using Matlab 7.00. The process is started from region of interest (ROI), noise reduction, contrast-stretching, brightness, thresholding, and morphological operations. After that we can analyze the data.

We use 14 bmp images dan 14 jpg images as data. Every image must be given gaussian, speckle, poisson, scratch, salt & pepper noise. Image analysis is performed by comparing the manual counting and automatic counting From that comparison we get information of mean percentae error value between 1,38 % - 10,57 %. Based on the result of analysis we can conclude that the system is reliable enough for analyzing quantitative of Scabies diseases automatically.

For futher research we need to find another method which is suitable to analyze every skin disease. For real-time monitoring remote patient we need to integrate this system with real-time system.

Keywords : teledermatology, scabies, quantitative analysis, digital image processing, ROI, image analysis.