Abstract

Esophagitis is a condition of inflammation of the esophageal mucosa, which is also called as acid reflux disease. The cause maybe be due to slackness of the lower esophageal sphincter which allows acidic contents of the food from stomach to esophagus. Esophagitis is detected by observing the esophagus by video endoscopy of the Upper Gastro-Intestinal tract. The classification of esophagitis is done by analyzing the images captured during the process of endoscopy. Classification of Esophagitis has many standards, with each standard having its plus and minus. The Los Angeles(LA) Classification deals with precise measurement of the mucosal breaks, for an image processing system to measure the mucosal breaks the position of the camera is to be known. We attempt to classify the Esophagitis using LA Classification without the camera position information using low level image features and classification is performed using a neural network classifier. The results of the classifier are compared with inter and intra observer variability studies.

References
Los Angeles Classification of Esophagitis using Image Processing Techniques

- Kaltenbach, T., Crockett, S., Gerson, L. B., Are lifestyle measures effective in patients with gastroesophageal reflux disease?: an evidence-based approach, Arch. Intern Med, 2006; 166: 965-971
- Tefera L, Fein M, Ritter MP, et al., Can the combination of symptoms and endoscopy confirm the presence of gastroesophageal reflux disease?, Arch. Surg, 1997;63:933–6
- Rath HC, et. al, Comparison of inter-observer agreement for different Scoring systems
for reflux esophagitis: impact of level of experience, Gastrointest Endosc. 2004;60:44-49.

**Index Terms**

Computer Science  
Artificial Intelligence

**Keywords**

Medical Diagnosis  
Esophagitis  
Image Processing  
Neural Network  
Classifiers