Utility of autofluorescence imaging videoendoscopy in screening for Barrett’s esophagus

Barrett’s esophagus is a gastroesophageal reflux disease (GERD)-associated disorder and is considered a premalignant lesion for Barrett’s cancer. Therefore, diagnosis of Barrett’s esophagus is very important [1, 2]. However, advanced skills are required to diagnose Barrett’s esophagus using white light imaging (WLI) endoscopy. Recently, the AFI (autofluorescence imaging) videoendoscopy system (Olympus, Tokyo, Japan) has been developed for the diagnosis of hyperplasia and inflammation in the gastrointestinal tract. We investigated the differences between Barrett’s esophagus and the normal esophagus using WLI and AFI. Five cases of normal esophagus and 17 patients with Barrett’s esophagus were examined using WLI and AFI. Esophageal mucosa, which was visualized as normal on WLI, appeared gray on AFI. Our findings indicate that Barrett’s esophagus can be easily distinguished from normal esophagus on AFI. Therefore, we consider AFI to be useful in screening for Barrett’s esophagus.

Endoscopy_UCTN_Code_CCL_1AB_2AC_3AC

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Fig. 1  Comparison of endoscopic findings at the esophagogastric junction using white light imaging (WLI) endoscopy and autofluorescence imaging (AFI) videoendoscopy:  

- a) normal esophagus (WLI);  
- b) normal esophagus (AFI);  
- c) Barrett’s esophagus (WLI);  
- d) Barrett’s esophagus (AFI). The esophagogastric junction is indicated by white arrows (c) and the squamocolumnar junction by black arrows (d).  

References

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Bibliography

Endoscopy 2009; 41: E113
© Georg Thieme Verlag KG Stuttgart · New York · ISSN 0013-726X

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