Accurate endoscopic differentiation of colonic polyps would allow resect and discard strategy for small colonic lesions.

Blue Laser Imaging (BLI), a new endoscopic system has been validated to detect adenoma. The accurate endoscopy differentiation remained a challenge and new classifications have been developed to better identify adenoma from hyperplastic polyps.

Recently, a classification system based on narrow band imaging (NBI) was validated for endoscopic differentiation of small and diminutive adenomas, hyperplastic polyps and Sessile Serrated Adenoma/polyps (SSA/Ps): the Workgroup serrAted polyPS and Polyposis (WASP) classification. In addition, the SANO classification was validated in the same conditions using the pit pattern and the vascularization of the lesion.

The aim of this study was to evaluate accuracy of the WASP and the SANO classifications in optical diagnosis polyps using BLI and magnification.

117 colonic polyps were studied in 45 patients in real-life colonoscopy, and prospectively included in the study.

Each polyp was evaluated with white-light, standard BLI, BLI-bright, with and without magnification (Zoom). Experts endoscopists reviewed all pictures and videos blindly using WASP and Sano classifications.

Polyps were classified according the histopathological diagnosis between adenoma (n=72), hyperplastic polyps (n=13), SSA/Ps (n=14), polypoid expansion of normal colonic mucosa (n=15) or invasive lesion (n=3).

Histological findings were correlated with clinical and endoscopic findings. The diagnosis accuracy was evaluated considering histology, size, WASP and SANO classifications. A discrepancy between SANO and WASP classification was considered as the most advanced type of lesions.

117 polyps were resected by endoscopic submucosal resection (EMR) with a mean size of 12.8 mm (1–60 mm).

Polyps location was proximal colon and distal colon in 57% and 43% respectively.

The overall sensitivity, specificity, positive and negative predictive value, and diagnostic accuracy of BLI with magnification using WASP classification for the endoscopic diagnosis of colorectal adenomas were 0.76 (95% CI = 0.66-0.85), 0.42 (95% CI = 0.25-0.63), 0.80, 0.36 and 76%, respectively.

The overall sensitivity, specificity, positive and negative predictive value, and diagnostic accuracy of BLI with magnification using SANO classification for optical diagnosis of advanced polyps were 0.91 (95% CI = 0.84-0.96), 0.67 (95% CI = 0.51-0.81), 0.86, 0.78 and 90%, respectively.

The diagnostic accuracy of SANO and WASP classifications to predict SSA/Ps were 79% and 85%, respectively.

Neither SANO nor WASP classifications were superior to detect SSA/Ps from adenoma (p = 0.82).

The sensitivity, specificity, positive and negative predictive value, and diagnostic accuracy of SANO classification for advanced adenomas were 0.91 (95% CI = 0.84-0.96), 0.67 (95% CI = 0.51-0.81), 0.86, 0.78 and 90%, respectively.

• BLI and magnification are advanced endoscopic images that challenges optical diagnosis. SANO classification permits better endoscopic differentiation of small adenomas and non-neoplastic lesions than WASP classification. We observe a trend to better optical diagnosis of SSA/Ps by WASP classification.

• Acquisition of basic knowledge in BLI and magnification endoscopy could permit to improve endoscopic optical diagnosis of SSA/Ps using the new WASP classification.

The objective of this study was to evaluate accuracy of the WASP and the SANO classifications in optical diagnosis polyps using BLI and magnification.

The background of the study is that accurate endoscopic differentiation of colonic polyps would allow resect and discard strategy for small colonic lesions. Blue Laser Imaging (BLI), a new endoscopic system has been validated to detect adenoma. The accurate endoscopy differentiation remained a challenge and new classifications have been developed to better identify adenoma from hyperplastic polyps. Recently, a classification system based on narrow band imaging (NBI) was validated for endoscopic differentiation of small and diminutive adenomas, hyperplastic polyps and Sessile Serrated Adenoma/polyps (SSA/Ps): the Workgroup serrAted polyPS and Polyposis (WASP) classification. In addition, the SANO classification was validated in the same conditions using the pit pattern and the vascularization of the lesion.

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