

Background

We have reported that magnifying chromoendoscopy is related to histology and can be used as a non-biopsy technique during colonoscopy to determine if the detected lesions are non-neoplastic or neoplastic for treatment decision.

Aim

This study is conducted to clarify if magnifying chromoendoscopy can be used to predict serrated adenoma during colonoscopy.

Materials and Methods

A retrospective study has been conducted at a private ambulatory clinic with a consecutive of 4568 patients undergoing 7697 colonoscopies from July 2003 to April 2009. Magnifying chromoendoscopy was performed with a commercially available magnifying colonoscopy using 0.4% indigo-carmin dye spraying, and 0.05% crystal violet staining was added if necessary. We have considered that a variation of type II pit pattern (IIIH) and type IV pit pattern (IVH) (Kudo's classification) with serration under magnification is a characteristic clue for endoscopic diagnosis of serrated adenoma. Therefore, in this study a polyp was endoscopically diagnosed as serrated adenoma when a type IIIH pit pattern and/or a type IVH pit pattern identified with magnifying chromoendoscopy. All polyps were removed endoscopically for histological evaluation.

Results

A total of 45 cases with 49 lesions were finally included in this study. Histologically, 35 of 49 lesions were diagnosed as traditional serrated adenoma (TSA), while 14 lesions were hyperplastic polyps (HP) or traditional adenomas (TA). Therefore, an overall diagnostic accuracy of type IIIH and/or type IVH pit pattern for serrated adenoma was estimated as 71.4% (35/49).

Endoscopic diagnosis and histological diagnosis of removed lesions in this study

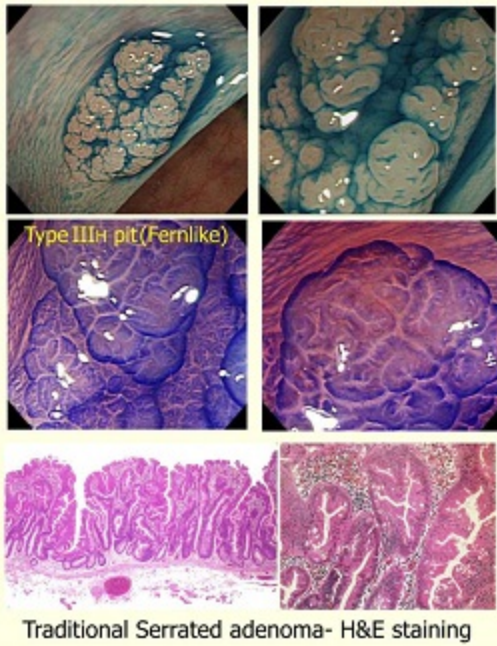
Pit pattern of Magnifying colonoscopy	Pathological diagnosis				Total
	Traditional Serrated Adenoma	MIXED (TSA+HP/TA)	Hyperplastic polyp	Traditional Adenoma	
IIIH pit	7 <47%>	4(1) <27%>	1 <7%>	3 <20%>	15(1) <100%>
IVH pit	7(3) <41%>	6 <35%>	1 <6%>	3 <18%>	17(3) <100%>
IIIH+IVH pit (combined type)	5 <29%>	6 <35%>	1 <6%>	5 <29%>	17 <100%>
Total	19(3) <39%>	16(1) <33%>	3 <6%>	11 <22%>	49(4) <100%>

() ; Number is indicated the lesion of carcinoma

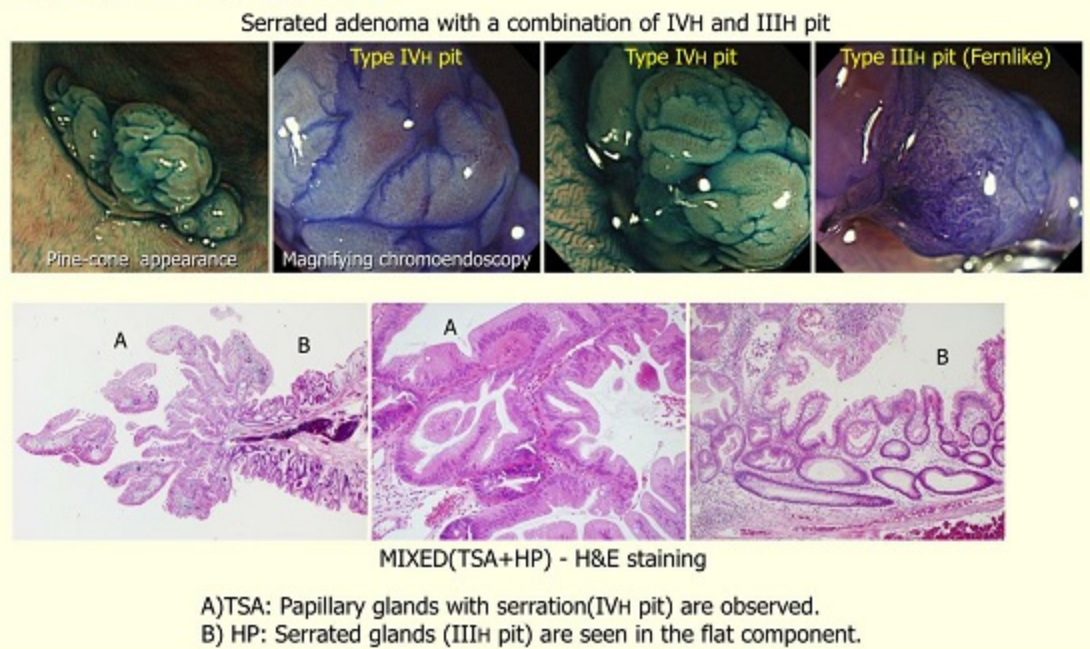
Conclusion

Magnifying chromoendoscopy can identify a significant number of serrated adenoma. As the difference between hyperplastic polyps and sessile serrated adenoma/polyp (SSA/P) was not available in this study, further study should be conducted to examine the difference to see if type IIIH pit pattern is characteristic of an SSA/P and type II pit pattern for a hyperplastic polyp.

56y, F, Sigmoid Colon, Iia, 12mm



71y, M, Rectum, Isp, 10mm



A combination of IIIH and IVH pit pattern under magnifying chromoendoscopy.



An SSA/P with a combination of II and IIIH pit pattern

