

TRADITIONAL SERRATED ADENOMA: A GROWTH AND PROGRESSION STUDY

P0162



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INTRODUCTION

The serrated adenoma pathway represents an alternative avenue to an estimated 7.5% of all colorectal cancers (CRC) and up to 17.5% of proximal CRC's. In recent years, many studies have reported on the molecular features of sessile serrated adenomas and polyps (SSA/P). In contrast to the SSA/P's, "Traditional Serrated Adenomas" (TSA) are usually sessile and are most commonly found in the left-sided colon (60%). We have previously suggested that these lesions may develop from hyperplastic polyps. As TSA's have many molecular features in common with villous adenomas, a link to left-sided CRC has also been proposed.

AIMS & METHODS

In this study we aimed to contrast the features of Traditional Serrated Adenomas with that of the more common tubular and tubulovillous adenomas. From July 2003 to September 2012, a total of 65 traditional serrated adenomas (TSA) were resected in our institution. The morphological features of these were compared with that of 230 tubulovillous adenomas (TVA) and 7169 tubular adenomas resected during the same period in our institution.

RESULTS

Table 1: TVA's, TA's and TSA's were significantly more frequent in men.

Table 2: TVA's were largest (mean TVA size 12.3mm), followed by 9.5mm for TSA's and 5.8mm for TA's. The risk of high grade dysplasia was highest in TVA's (27.4%), compared with 9.2% in TSA's and only 1.2% in TA's.

Fig. 1: Most TVA's were found in the rectum (16.0%) and sigmoid colon (41.3%). TSA's were equally distributed in the rectum (26.1%) and the sigmoid colon (29.2%). TA's on the other hand were mainly situated in the right colon (63.2%) with only 6.0% located in the rectum.

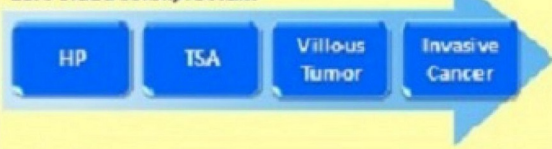
Fig. 2: Most TA's appeared as flat elevated lesions (59.4%), whilst both TVA's and TSA's with a villous component were usually protruding type lesions (85-88%).

Fig. 3: About 60% of TA were small lesions with less than 5mm while TSA measured 6-10mm, being most TVA the largest with 11mm in size.

CONCLUSION

TVA and TSA have more than a villous component in common. There are also similarities in macroscopic appearance, location, malignant component and size range. These findings support our proposition that some left-sided hyperplastic polyps develop into serrated lesions and subsequently into villous adenomas.

Left-sided colon/rectum



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2. Jost R, Spiller DC, Fegans D, et al. Mixed hyperplastic adenomatous polyps/serrated adenomas: A distinct form of colorectal dysplasia. *Am J Surg Pathol*. 1990 Jun;14:524-37.

Table 1: Patients characteristics of Histological types

Histological Type	Mean age(yrs)	Sex ratio (Male/Fem sex)
Tubulovillous Adenoma (TVA) (230 lesions, 206 cases)	59.0	1.7 (131/75)
Traditional Serrated Adenoma (TSA) (65 lesions, 57 cases)	59.3	1.4 (53/24)
Tubular Adenoma (TA) (7169 lesions, 2783 cases)	59.6	1.5 (1673/1110)

Table 2: Clinicopathological features of Histological types

Histological Type	Mean size	Location; Rectum/Left/Right side	Macroscopic; Protruded/Superficial	Severe dysplasia (%)
TVA (n=230)	12.3mm (3-40)	37/103/90	217/13	63 (27.4%)
TSA (n=65)	9.5mm (4-20)	17/24/24	57/8	6 (9.2%)
TA (n=7169)	5.8mm (1-40)	362/2277/4530	2447/4722	87 (1.2%)

Fig. 1: Histological type and Location

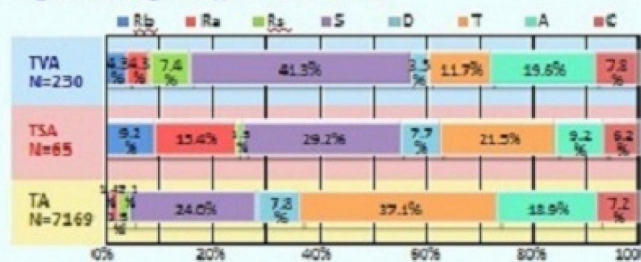


Fig. 2: Incidence of Macroscopic type in Histological Type

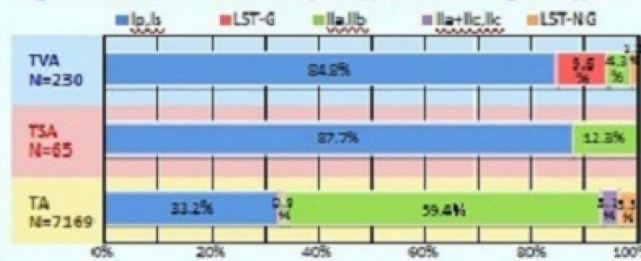
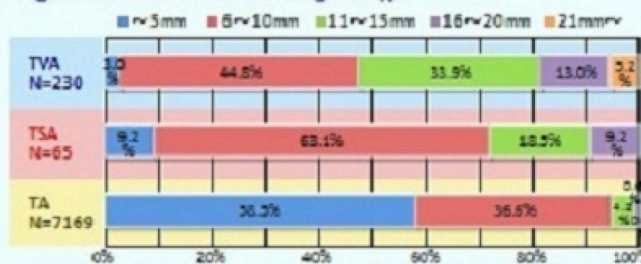
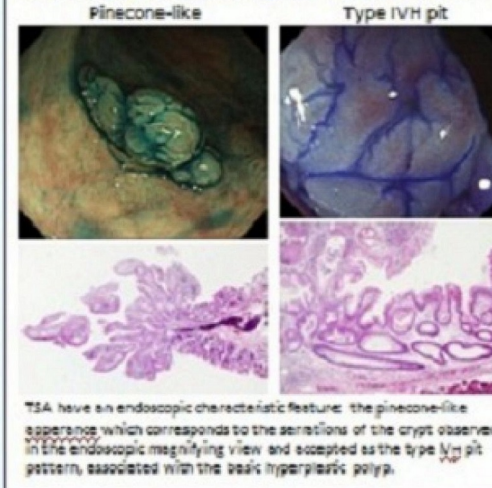


Fig. 3: Tumor size and Histological type



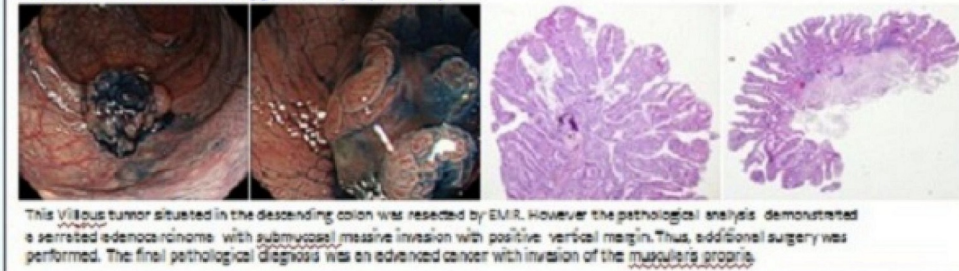
Endoscopic and histological feature in TSA



Endoscopic image of TSA



Villous tumor with type IVH pit (Case 1)



Serrated adenocarcinoma (Case 2)



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INTRODUCTION

The serrated adenoma pathway represents an alternative avenue to an estimated 7.5% of all colorectal cancers (CRC) and up to 17.5% of proximal CRCs. In recent years, many studies have reported on the molecular features of classic serrated adenomas and polyps (SAs). In contrast to the SAs, Traditional Serrated Adenomas (TSA) are usually sessile and are more commonly found in the left sided colon (60%). We have previously suggested that these lesions may develop from hyperplastic polyps. As TSAs have many molecular features in common with villous adenomas, a link to left sided CRC has also been proposed.

AIMS & METHODS

In this study we aimed to contrast the features of traditional Serrated Adenomas with that of the more common tubular and tubulovillous adenomas. From July 2009 to September 2012, a total of 65 traditional serrated adenomas (TSA) were resected in our institution. The morphological features of these were compared with that of 230 tubulovillous adenomas (TVA) and 2189 tubular adenomas resected during the same period in our institution.

RESULTS

Table 1: TWs, TAs and TSAs were significantly more frequent in men.

Table 2: TWs were largest (mean TSA size 12.3mm), followed by 9.5mm for TSAs and 5.8mm for TAs. The risk of high grade dysplasia was highest in TWs (27.4%), compared with 9.2% in TSAs and only 1.2% in TAs.

Fig 1: Most TWs were found in the rectum (16.0%) and sigmoid colon (41.3%). TSAs were equally distributed in the rectum (26.1%) and the sigmoid colon (29.2%). TAs on the other hand were mainly situated in the right colon (63.2%) with only 6.0% located in the rectum.

Fig 2: Most TAs appeared as flat elevated lesions (50.0%) while both TWs and TSAs were usually protruding types (70.0%).

Fig 3: About 60% of TAs were 10mm in size while TSA, measured with 11mm in size.

CONCLUSION

TVA and TSA have similar appearance. These findings suggest that hyperplastic polyps may be a precursor of TSA.

Left-sided

Table 1: Patients characteristics of Histological types

Histological Type	Mean age(yrs)	Sex ratio (Male/Female)
Tubulovillous Adenoma (TVA) (230 lesions, 236 cases)	59.0	4.7 (131/75)
Traditional Serrated Adenoma (TSA) (65 lesions, 57 cases)	59.3	1.4 (33/24)
Tubular Adenoma (TA) (2189 lesions, 2283 cases)	55.8	1.5 (1678/1100)

Table 2: Clinical features of Histological types

Histological Type	Macronucleic acid/Superficial (%)	Severe dysplasia (%)
TVA	77/13	43 (27.4%)
TSA	10/90	6 (9.2%)
TA	1722	87 (1.2%)

Endoscopic and histological feature in TSA

Pinecone-like Type /vs pit



TSA have an endoscopic characteristic feature which corresponds to the serrated appearance which corresponds to the serrated appearance in the endoscopic magnifying view and corresponds to a hyperplastic polyp, associated with the basic hyperplastic polyp.

Endoscopic image of TSA



observed in the surface of a TSA, which corresponds to a hyperplastic polyp and can be considered as a feature of the serrated adenoma.

Villous tumor with type IVH



This villous tumor situated in the descending colon was a serrated adenocarcinoma with submucosal invasion. The final pathological diagnosis was pT4N1M0.

Serrated adenoma



CONFLICT

There is no financial support from any source.

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1. Saito Y, et al. J Gastroenterol 2012; 47: 100-105.

ACKNOWLEDGEMENTS

We thank the staff of TF CLINIC for their assistance during the study.

DISCLOSURE

The authors have nothing to disclose.

CONTACT

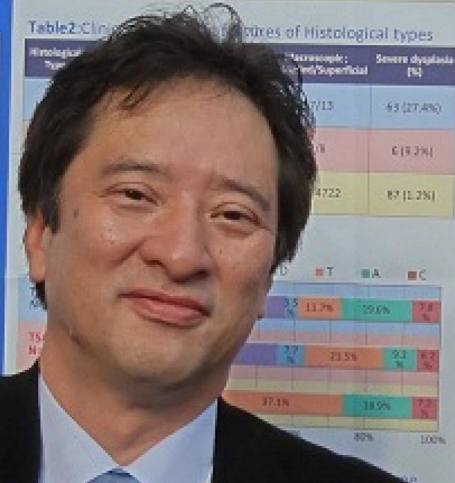
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KEYWORDS

Traditional serrated adenoma, histology, endoscopy, progression, colorectal cancer.

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1. Saito Y, et al. J Gastroenterol 2012; 47: 100-105.



efficacy and tolerability of specially designed test...
 bowel preparation

Jun-Ho Park, Eun Hee Seo, Nae Yun Heo, Jongha Park, Inje University College of Medicine, Daegu

Abstract

Split-dose PEG is a standard bowel preparation for colonoscopy but large volume is burdensome to ingest...
 Bowel preparation, Colonoscopy, Polyethylene glycol, split-dose

Patients and Methods

Study design and patients: A double-blind, prospective, randomized controlled trial...
 Study criteria: Ages of 18 and 85 years outpatients undergoing elective colonoscopy...
 Exclusion criteria: Pregnancy, breast feeding, prior history of large bowel resection, severe medical condition such as cardiac, hepatic, or renal failure, loperamide 2-3.0 mg/d, (10-14 mg/d), significant gastric paresis or gastric outlet obstruction or ileus, known or suspected bowel obstruction or stenosis, drug addiction or major psychiatric illness, allergy to PEG, refusal to participate in the study.