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Research Article

PATHOLOGIC, CLINICAL AND ENDOSCOPIC TRAITS OF THE PATIENTS WITH COLORECTAL SERRATED POLYPS

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Abstract:

Objective: Colorectal Serrated Polyp is thought to be a histologically heterogeneous abrasions with much potential of malignancy. The objective of this research work was assessing the clinical, endoscopic and pathologic traits of patients suffering from Colorectal Serrated Polyp.

Methodology: In this research work, we analyzed the characteristics of endoscopy, clinical finding and pathology of fifty-two patients present with Colorectal Serrated Polyp from March 2016 to June 2020. We performed this research work retrospectively.

Results: The prevalence rate of serrated polyps was 0.39%. We also found that the percentage of the HP (Hyperplastic Polyp), SSA/P (Sessile Serrated Adenoma/Polyp) and TSA (Traditional Serrated Adenoma) of all the present serrated polyps were 61.50%, 17.30% and 21.20%, correspondingly, which stated a very low proportion of SSA/P and TSA and a very high HP proportion.

Conclusions: Overall rate of detection of the Colorectal Serrated Polyp was much low and it is much vital to discriminate between HPs and SSAPs while examining through endoscopy because it has the potential of malignancy.

KEYWORDS: Malignancy, Colorectal Serrated Polyp, Sessile Serrated Adenoma/Polyp, Traditional Serrated Adenoma, endoscopy.

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INTRODUCTION:

Colorectal Cancer is very serious issue of health; it is the 3rd most common type of cancer present in the world and it is the 4th most frequent cause of death because of cancer [1]. There is believe that there is rise of this issue from 3 different pathway, which is responsible for approximately 50.0% to 70.0% cancers; from route of mutator “Lynch Syndrome” (3.0% to 5.0%) and currently serrated pathway (from 30.0% to 35.0%) [2]. Colorectal Serrated Polyp is thought to be the heterogeneous abrasion histologically with having a potential of malignancy. According to the histologically characteristics of the Colorectal Serrated Polyp it has serrated or saw tooth like appearance of crypt epithelium [3], there are 3 distinct subtypes according to the classification provided by WHO (World Health Organization); HP (Hyperplastic Polyps), SSA/P (Sessile Serrated Adenoma/ Polyps) and TSA (Traditional Serrated Adenoma) [4].

Not like the adenomas which is derived from the adenoma-carcinoma sequence, all the serrated abrasions are not linked with the colorectal cancers. SSA/Ps seems to be the accountable precursor abrasion for developing the cancers through serrated pathway [5]. So, the aim of this research work was to assess the pathological and clinical characteristics of the Colorectal Serrated Polyp. Here, we reported fifty-two patients of Colorectal Serrated Polyp and assessed the different features of serrated polyps and rate of detection.

METHODOLOGY:

This study is a retrospective research work. All the patients with suspicion of having Colorectal Serrated Polyp who had to undergo treatment through endoscopy at DHQ Hospital Rajanpur, from March 2016 to June 2020, were examined. We excluded the abrasions removed by the cold or hot biopsy because material of biopsy was no satisfactory and it was not much suitable for the detection of SSAP, TSA or HP [8]. To completely eliminate the presence of bias because of pathologists, two skilled pathologists reclassified and re-evaluated the pathological sections of Colorectal Serrated Polyp using the criteria as prescribed by the WHO [6]. Then the re-evaluation of the demographic as well as clinic-pathological data was carried out to reach the final outcome. Data included the gender of the patients, age, size of lesion, number of polyps and its site. We defined the proximal polyps as the polyps present in the ascending colon, cecum and transverse colon with splenic flexure and we explained the distal polyps as the polyps in the rectum, descending colon and sigmoid colon. We took

the written consent for colonoscopy from every patient before the start of procedure and we also attained the ethical approval from the institute for the conduction of this research work. We recruited total fifty-two patients in this research work and we explained the procedure to the patients. One patient was present with colon carcinoma, 2 patients were present with intraepithelial neoplasia of high grade and 6 patients were present with intraepithelial neoplasia of low grade.

The range of the age of the patients was 22-83 years with an average age of 56.60 ± 12.40 years. The presenting issues was pain in abdomen cavity in 23.10% (n: 12) patients, hematochezia in 25% (n: 13) patients, abdominal distention available in four (7.70%) and diarrhea in 17.30% (n: 9) patients, whereas the remaining patients were incidentally discriminated with the use of endoscopy without any particular symptoms. Patients with less than twenty-two years of age, patients present with polyposis syndromes, patient with diseases of inflammatory bowel, patients present with past history of the polypectomy and the patients with therapeutic colonoscopy were not included in this research work [7]. We used the colonoscopy for all the patients by 3 skilled professionals. We classified the serrated lesions in three subtypes of SSA/P, HP and TSA following criteria of WHO. Saw tooth pattern is the pathological feature of the HP [11], and typical shape of SSA/P is like boot, L or anchor [8]. We used the SPSS V.23 for the statistical analysis of the collected information. We calculated the mean and standard deviations different continuous variables. We used the student T test for the comparison between the continuous variables.

RESULTS:

A sum of 3346 patients who were undergoing colonoscopy from March 2016 to June 2020 were the participants of this research work and about 17.30% (n: 310) patients were identified with at least pathological review with the utilization of the criteria prescribed by WHO, we found the fifty-two patients of serrated lesions, 0.39% only among 3346 of colonoscopy in the similar period, accounting for 2.20% (52 out of 310) of polyp cases identified in the same duration of this research work. There were twenty-nine males and twenty-three female patients in this research work. The mean age of the patients was 56.60 ± 12.40 years. Clinical epidemiological traits of various types of serrated polyps in fifty-two patients are available in Table-1. Mean age of the TSA, HP and SSA/P were 54.30 ± 12.40 , 58.70 ± 7.80 years and 62.50 ± 11.50 years, respectively. There was more

prevalence of serrated polyps in males as well as elder patients but the difference was not much different

significantly in the distribution of subtype in age and gender ($P > 0.050$, Table-1).

Table-I: General Clinical Epidemiological Characteristics of Different Types of Serrated Polyps

Clinical characteristics (n)		CSP (52)	HP (32)	SSA/P (9)	TSA (11)	X ² /T test	P-value
Age	Age (years)	56.6±12.4	58.7±7.8	62.5±11.5	54.3±12.4		
	<50	16	11	1	4	1.639	0.439
	>50	36	21	8	7		
Gender	Male	29	20	4	6	0.993	0.642
	Female	23	12	5	5		
Symptom	Abdominal pain	12	8	2	2	0.02	0.992
	Hematochezia	13	7	2	4	0.03	0.972
	Abdominal distention	4	2	1	1	0.07	0.963
	Diarrhea	9	5	2	2	0.13	0.736
	Discovered by examination	14	10	2	2	0.15	0.708

CSP: Colorectal serrated polyps, **HP:** Hyperplastic polyp, **SSA/P:** Sessile serrated adenoma/polyp, **TSA** Traditional serrated adenoma, **SD:** Standard deviation.

Manifestations through endoscopy of various kinds of serrated polyps as site, size, and shape are present in Table-2. There was much less diameter of the serrated polyps present in this research work (<20.0 mm). Furthermore, site of the various kinds of the serrated polyps stated no important difference in the anatomic location (55.80% in distal colon): HP (56.30% in the distal colon), SSA/P (44.40% in the distal colon) and TSA (63.60% in the distal colon), correspondingly. SSAPs were more common in the proximal colon whereas TSA and HP were observed more common in distal colon. According to appearance, majority of the SSAP and HP abrasions were flat, whereas majority of the TSA abrasions were protruding. There was no important difference as concluded by this research work ($P > 0.050$, Table-2).

Table-II: Endoscopic Manifestations of Different Types of Serrated Polyps

Endoscopic Features (n)		CSP (52)	HP (32)	SSA/P (9)	TSA (11)	X2 test	P-value
Location	Distal colon	29	18	4	7	0.75	0.733
	Proximal colon	23	14	5	4		
Shape	0-IIb type	36	26	7	3	2.61	0.486
	0-IIa type	10	6	2	2	0.04	0.97
	0-Is type	5	0	0	5	-	-
	0-Ip type	1	0	0	1	-	-
Size	<5 mm	16	11	2	3	0.03	0.972
	6-10 mm	23	16	3	4	0.58	0.742
	11-20 mm	11	5	3	3	0.18	0.925
	>20 mm	2	0	1	1	2.21	0.224

CSP: Colorectal serrated polyp, **HP:** Hyperplastic polyp, **SSA/P:** Sessile serrated adenoma/polyp, **TSA:** Traditional serrated adenoma. Proximal colon includes cecum-transverse colon.

Distal colon includes descending sigmoid colon.

• The Paris classification of superficial neoplastic lesions in the digestive tract: 0-Ip, 0-Is, 0-IIa, 0-IIb.

Among total, 17.30% (9 out of 52) serrated polyps were available with the dysplasia and dysplasia of low grade in 66.70% (6 out of 9) which was more frequently found. One TSA as well as one SSAP with dysplasia of high grade were available in this research work. One serrated polyp was discovered related with the canceration. But the available difference was not much significant ($P > 0.050$, Table-3).

Table-III: The Degree of Dysplasia of Each Type of Colorectal Serrated Polyp

Dysplasia(n)	CSP	HP (32)	SSA/P (9)	TSA (11)	Fisher exact test	P-value
No dysplasia	43	32	4	7	0.38	>0.05
Low-grade dysplasia	6	0	3	3	0.66	>0.05
High-grade dysplasia	2	0	1	1	0.41	>0.05
Canceration	1	0	1	0	-	-

CSP: Colorectal serrated polyp, **HP:** Hyperplastic polyp, **SSA/P:** Sessile serrated adenoma/polyp, **TSA** Traditional serrated adenoma.

DISCUSSION:

The findings showed that it is much vital to discriminate between HPs and SSAPs during the examination through endoscopy. After the fully classification of serrated polyps in 2005, Colorectal Serrated Polyp were always stated to have sessile appearance [9]. There is variation in the rate of detection of endoscopy of SP according to the findings of different research works [10]. The range of the prevalence of Colorectal Serrated Polyp in different countries of the west was from 1.0% to 18.0% (mean as 13.0%) [11]. This current research work stated a rate detection of Colorectal Serrated Polyp of 0.78%, as compared to other research work which showed the increase with the increase of age [12]. Age-specific incidence of the serrated polyps was not discovered to rise with the rise in age in this current research work ($P>0.050$) which is not similar with the other research works. Some research works have stated that increase in the age was not related with danger of acquiring serrated polyps [13]. Therefore, there is need of further research works to find out whether aging is related with the development of Colorectal Serrated Polyp. Previous research works have stated that proximal and large serrated polyps were independent forecasters of advanced neoplasia. We discovered that there is no association of HPs with the dysplasia [14,15]. The findings of this research work suggested that we cannot ignore the SSA/P abrasions from left semicolon as supported by another research works.

CONCLUSION:

The findings of this research work showed that there was very low rate of detection of the Colorectal Serrated Polyp and the pattern of distribution of all its three sub-types is not similar as stated in the research works of past. There is need of prospective research works to assess the precise rate of prevalence and distribution of sub-types of Colorectal Serrated Polyp.

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