



ORIGINAL RESEARCH PAPER

Pathology

DEMOGRAPHY AND HISTOMORPHOLOGICAL SPECTRUM OF COLORECTAL POLYPS - A 5 YEAR STUDY IN A TERTIARY CARE CENTRE IN TAMILNADU.

KEY WORDS: Adenoma, High Grade Dysplasia, Screening Colonoscopy

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ABSTRACT

Introduction: A polyp is defined as any mass protruding into the lumen of any hollow viscus. They are classified histomorphologically as neoplastic and non neoplastic polyps. The neoplastic polyps are of great concern because they harbour a malignant potential which represents a stage in the development of colorectal cancer. The adenoma carcinoma sequence can be interrupted by the simple outpatient procedure of Colonoscopic Polypectomy. Study on colorectal polyps in Tamilnadu is scanty.

Aims and objectives: The aim of this study is to analyse the demography and histomorphological spectrum of colorectal polyps in our region.

Materials and methods: A 5 year Retrospective study from January 2013 to December 2017 was conducted in a tertiary care hospital, Salem district, Tamilnadu. The age and sex of the patient, site of occurrence, size of the polyp and histopathological report of 172 patients were analysed.

Results: Out of 172 cases, 119 were non neoplastic polyps and 53 were neoplastic polyps. 84% of patients in our study population were above the age of 40 years. Tubular adenoma was the most commonly diagnosed neoplastic polyp. 13 out of 20 cases of polyps with high grade dysplasia, measured >1 cm in diameter. Left sided polyps outnumbered right sided ones with sigmoid colon being the most commonly involved site.

Conclusion: Screening colonoscopy helps to detect incidental colorectal polyps and interruption of adenoma carcinoma sequence through Colonoscopic Polypectomy helps to reduce the morbidity and mortality of colorectal malignancy.

INTRODUCTION: A polyp is defined as any mass protruding into the lumen of a hollow viscus anywhere in gastrointestinal, respiratory and genitourinary tracts usually arising from the mucosal layer¹. Colorectal polyps are histologically classified as neoplastic and non neoplastic². The most common neoplastic polyps are colonic adenomas which form the precursors of majority of colorectal adenocarcinoma². The non neoplastic polyps may be hyperplastic, hamartomatous or inflammatory. Based on colonoscopic appearance, colonic polyps are classified as sessile or pedunculated¹. Based on their architecture, adenomas are classified as tubular, villous and tubulovillous. The incidence of invasive carcinoma in a polyp is dependent on the size and histological type of the polyp¹. The risk of malignancy increases with increase in the degree of dysplasia in adenomatous polyps¹. The polyp is considered malignant when the tumour cells have infiltrated the submucosal layer³.

MATERIALS AND METHODS: This is a retrospective study for a period of 5 years from January 2013 to December 2017 conducted in a tertiary care gastroenterology superspeciality hospital in Salem district, Tamilnadu. 172 patients who were diagnosed to have colonic polyps during colonoscopy were included in our study. The age and sex of the patient, site, size of the polyps, sessile or pedunculated nature were noted and tabulated. Size of the polyps was categorised as less than 0.5cm, 0.6-0.9cm, and ≥1cm. Polyps detected between Caecum and Splenic flexure were termed as right sided and polyps located distal to Splenic flexure were considered as left sided. Colonoscopic biopsies taken from the polyps were fixed in 10% buffered neutral formalin, tissues were hand processed and paraffin embedded tissue blocks were made. 4 micron thick tissue sections were cut and stained with haematoxylin and eosin stain and reported by a pathologist. Patients with inflammatory bowel disease and colorectal carcinoma were excluded.

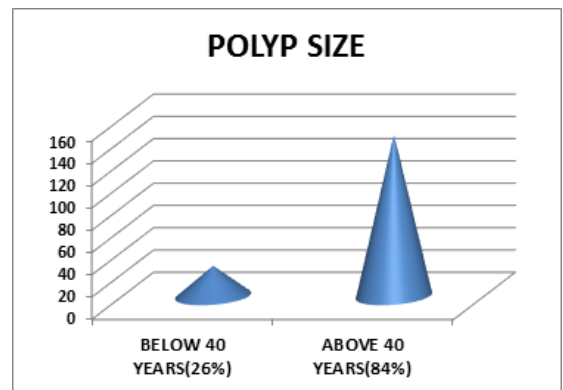
RESULTS: Total number of patients included in our study was 172, of which 127 were males and 45 were females. The mean age of incidence was 55 years. 145 out of 172 patients in our study population were above the age of 40 years (84%). Non neoplastic polyps (n=119, 69%) outnumbered neoplastic polyps (n=53, 31%). Hyperplastic polyps (n=66, 38%) were the commonest non neoplastic polyp. Among the neoplastic variety, tubular adenoma was the most common type (n=35, 20%). Left sided polyps (n=124)

were more common than right sided (n=48) with Sigmoid colon, being most commonly involved (n=78) site, followed by Rectum (n=36). Sessile polyps were 163, and pedunculated were 9. Among the 33 Adenomatous polyps with low grade dysplasia, 3 were ≥ 1 cm in diameter, 3 were between 0.6 -0.9cm and 27 polyps measured less than 0.5cm. Out of 20 Adenomatous polyps with High grade dysplasia, 13 were ≥ 1cm and 7 were between 0.6-0.9cm.

Table:1

S.NO	HISTOPATHOLOGICAL DIGNOSIS	COUNT (n)	%
1	HYPERPLASTIC POLYP	66	38%
2	INFLAMMATORY POLYP	51	30%
3	ADENOMATOUS POLYP WITH FOCAL LOW GRADE DYSPLASIA	33	19%
4	TUBULOVILLOUS ADENOMA WITH HIGH GRADE DYSPLASIA	20	12%
5	JUVENILE POLYP	2	1%
	TOTAL	172	100%

Figure:1



DISCUSSION: Colonoscopy is one of the most effective screening modalities because detection and removal of colorectal polyps through colonoscopy can reduce the incidence of colorectal cancer by upto 90%^{4,5}. In our study, we have noticed increased

prevalence of colonic polyps in patients above 40 years which is similar to the study conducted by Rajeev Jayadevan⁶. The left sided polyps were more common than right sided ones, similar to study by Thomas et al⁷. Among the 53 Adenomatous polyps, 43 were left sided, 11 were right sided, similar to study conducted by Rajeev Jayadevan et al⁶. Regarding the site, Sigmoid colon was most commonly involved site in our study, whereas Rectum was most commonly involved in the study conducted by Rajeev Jayadevan, Delavani A and Shilpa K^{6,8,9}. The hyperplastic polyp was more commonly diagnosed histological type than adenomatous polyps similar to Rajeev Jayadevan et al⁶. Sessile polyps were commoner than pedunculated, similar to the study by Yoon Jeony Nam¹⁰. Among the adenomatous polyps, tubular adenoma was encountered in 65% and tubulovillous adenoma in 35% of patients. This was similar to the study of Shilpa K⁹. Among the 20 polyps with high grade dysplasia, 65% were ≥ 1 cm in size (n=13) in our study group. Polyps with more than 0.5 cm size have 3% chance of harbouring cancer and the chance increases with increasing polyp size¹. The incidence of colonic cancer is 7/100000 in India¹¹. Interruption of adenoma-carcinoma sequence reduces the incidence of colorectal cancer by 90%⁴.

CONCLUSION: The prevalence of colorectal polyps increases above the age of 40 years. Histologically, Hyperplastic polyps was the commonest Nonneoplastic polyp. Tubular adenoma was the most common neoplastic polyp. Most of the colorectal polyps with high grade dysplasia measured ≥ 1 cm in diameter. Left sided polyps predominate, with the commonest site involved being the sigmoid colon. Screening colonoscopy should be widely practised in our part of the country to detect incidental colorectal polyps and colonoscopic polypectomy helps to decrease the morbidity and mortality related to colorectal malignancies.

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