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Histomorphological Spectrum of Colorectal Polyps

Authors
Dr Shilpa K[1], Dr Sharath Kumarh H K[2], Dr Monica G S[3], Dr Nimmy Mathew[4]
[1]Associate Professor of Pathology, Mysore Medical College and Research Institute, Mysore
[2]Associate Professor of Pathology, Mysore Medical College and Research Institute, Mysore
Email: *sharath_hk@hotmail.com, Contact number: 9743813949*
[3]Postgraduate student, Mysore Medical College and Research Institute, Mysore
Email: *monicags737@gmail.com, Contact number: 9916222939*
[4]Postgraduate student, Mysore Medical College and Research Institute, Mysore
Email: *nimmymdpath@gmail.com, Contact number: 9148619342*
Dr Shilpa K
Address: # 574/A, North East of N R Mohalla, Mysore 570007
Email: *karrashilpa@yahoo.com, Contact number: 9060500075*

Abstract
Introduction: *Polyp is defined as any mass protruding into the lumen of hollow viscus. The four major types of polyps are juvenile polyp, Peutz-Jeghers polyps, hyperplastic polyps and adenomatous polyps. A fifth lesion, recently recognized but uncommon, is the mixed hyperplastic-adenomatous polyp. However it is only by microscopic examination it is possible to determine whether these polyps are neoplastic or non neoplastic. The neoplastic polyps are of primary importance because they are precursors of invasive adenocarcinoma. For this reason, it is essential to identify these polyps at a sufficiently early stage, when a simple outpatient procedure to remove them caninterrupt the development of colorectal cancer and prevent disease and death.*
Aims and Objectives: *We retrospectively conducted the study to histomorphologically evaluate the colorectal polyps in our centre.*
Materials and Methods: *A retrospective study of colorectal polpoidectomy specimens received in the Department of Pathology, Mysore Medical College and Research Institute over a period of June 2012 – June 2016 was conducted. Histopathological examination was done after routine processing and staining with haematoxylin and eosin.*
Results: *Out of 30 cases studied adenomatous polyp constituted the most common lesions (60%) followed by hyperplastic polyp (20%). Most of the polyps were situated in the rectum with male preponderance.*
Conclusion: *An understanding of the pathology of colorectal polyps and cancers is necessary in order to deliver the most appropriate therapy and devise effective screening programmes that reduce morbidity and mortality.*
Key Words: *Colorectal polyps, Adenomas, Adenocarcinoma.*

INTRODUCTION

A polyp is a grossly visible protrusion from a mucosal surface. The small bowel is the most commonest site for the polyps and present with abdominal pain and sometimes intussusception.[1] Colorectal polyps may be histologically classified

as neoplastic, hyperplastic, Peutz Jegher, or inflammatory. The neoplastic polyps are of primary importance because they harbor a malignant potential, which represents a stage in the development of colorectal cancer. For this reason, it is essential to identify these polyps at a sufficiently early stage, when a simple outpatient procedure to remove them can prevent the development of colorectal cancer and prevent disease and death. Colorectal polyps may be classified by their colonoscopicappearance as sessile (flat, arising directly from the mucosallayer) or pedunculated (extending from the mucosa through a fibrovascular stalk).Juvenile polyp is the most frequent polyp seen in children but approximately one third of the cases occur in adults[2].In general intestinal polyps can be classified as non neoplastic and neoplastic in nature.[3]The most common neoplastic polyp is the adenoma, which has the potential to progress to cancer[4].Higher grades of dysplasia, increasing percentage of villous tissue within the polyp are associated with increased risk of malignancy. A polyp is considered malignant when cancer cells within the neoplasm have extended to the submucosa via penetration through the muscularis mucosal layer.[5]

METHODS

The present study included cases of colorectal biopsy specimens taken from polypoidal growth which were received in the Department of Pathology, Mysore Medical College and Research Institute from June 2013 to June 2016 were studied.

RESULTS

A total of 30 cases were studied. Age ranged from 3 to 77years.The mean age of the patient was 43.6 years[6]. Polyps were most commonly observed in 6th decade with majority in males thanfemales[7] and rectum was the most common site. Out of 30 cases studied adenomatous polyp constituted the most common polyps (60%) followed by hyperplastic polyp(20%). Inflammatory polyp and juvenile polyp constituted 10% of cases each. Most of the adenoma on gross were pedunculated and protruding into the lumen and were ranging in size from 1 to 2 cm and microscopically villous adenoma were more common followed by tubulovillous adenoma and tubular adenoma.

Table1: Distribution of Polyps

Sl.No	Distribution Of Polyps	No Of Cases	Percentage	Male/Female
1)	Hyperplastic Polyp	6	20	4/2
2)	Inflammatory Polyp	3	10	2/1
3)	Adenoma With Low Grade Dysplasia	8	26.7	5/3
4)	Adenoma With High Grade Dysplasia	10	33.3	6/4
5)	Juvenile Polyp	3	10	2/1

Table 2: Histological Type of Adenomatous Polyp:

Sl No	Histological Type	Size< 1 Cm	Size 1-2 Cm	Size > 2cm	Percentage	Total
1	Villous	1	3	8	66.7	12
2	Tubulovillous	0	2	3	27.7	5
3	Tubular	1	0	0	5.6	01
Total		2	5	11		18

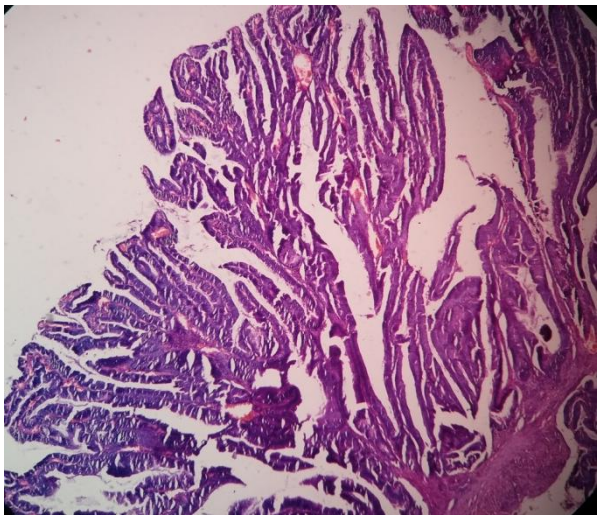

Fig 1: Low power view of villous adenoma

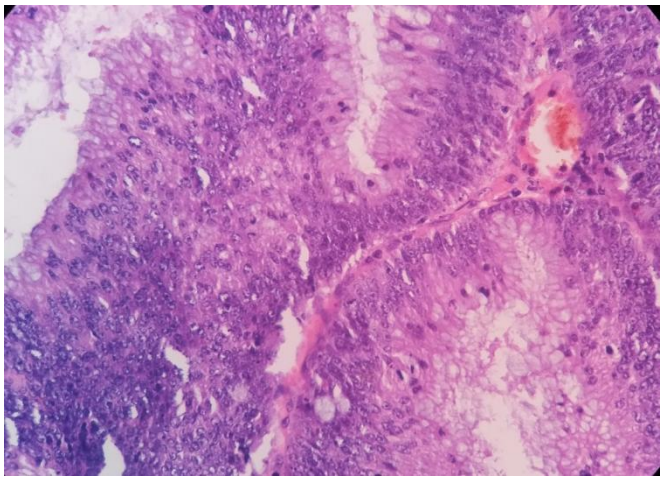

Fig 2: High power view of villous adenoma showing features of high grade dysplasia

DISCUSSION

The mean age of the patient was 43.6 years which was comparable with study done by Alireza D et al[6] and the most common site rectum with male preponderance[8]which is also comparable with our study

Overall, in most of the studies from Western countries, adenomatous polyps have been more common than hyperplasticpolyps[8,9,10] which also correlates with our study.

CONCLUSION

The commonest colorectal polyp type was villous adenomatous polyp. The riskof occurrence of colorectal adenoma increased 5 fold after age 40. Screening programs especially in people over 50 years, are recommended as tubulovillous or villous have more frequent development of a metachronous adenoma or carcinoma.

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