

Adenomatous Polyp with High Grade Dysplasia and Foci of Adenocarcinoma Arising From Prolapsed Mucosa of Internal Hemorrhoids: A Case Report

Dr Harsha H S¹, Dr Lilarani Vijayaraghavan²

¹Junior resident, Department of Pathology, Government medical college, Thiruvananthapuram, Kerala, India

²Professor and Head of the Department, , Department of Pathology, Government medical college, Thiruvananthapuram, Kerala

ABSTRACT

Adenomas are benign, premalignant neoplasm composed of dysplastic epithelium. In lower Gastro intestinal tract, adenomatous polyps most commonly occur in colon and rectum. Although rare, it can also arise in anal canal. These neoplasms have the potential to transform into malignancy. Primary Adenocarcinoma arising from prolapsed hemorrhoids being an extremely rare entity warrants an interdisciplinary approach to treatment.

KEYWORDS: Adenomatous polyp, Adenocarcinoma anal canal, Internal hemorrhoids

ARTICLE DETAILS

Published On:

30 May 2022

Available on:

<https://ijmscr.org/>

INTRODUCTION

Adenomatous polyps are extremely rare in anal canal. Although rare, anal canal adenomas can arise in the setting of Familial Adenomatous Polyposis, which can coexist with multiple colorectal adenomas. Even frank adenocarcinomas can arise from such anal adenomatous polyps. We here describe a case of adenomatous polyp with high grade dysplasia and foci of adenocarcinoma which arose from prolapsed mucosa of long standing internal hemorrhoids in a person without any other risk factors.

CASE SUMMARY

A 66year old man, with history of hemorrhoids with mucosal prolapse for past 40years, but he ignored the mass as he was otherwise asymptomatic. 2years back he developed a polyp along with the preexisting hemorrhoids, but he mistook as a newly developed pile mass. Now, he presented with intermittent bleeding per rectum for 1 month duration.

On examination : Two grade 4 hemorrhoids at 3 O'clock and 11O' clock positions with a reddish polypoidal mass with focal surface ulceration attached to hemorrhoid at 3O' clock position protruding out through the anal canal, measuring 2x2x1.5cm (Fig 1)



Figure 1: Grade 4 hemorrhoids at 3 O'clock and 11O' clock positions with a reddish polypoidal mass protruding out through anal orifice.

INVESTIGATIONS

Blood investigations including CEA were normal.

Colonoscopy showed a single pedunculated polyp arising from rectal wall measuring 2.5x2.8x1.8cm, with surface ulceration.

Biopsy was taken from the polyp 2 months back, the report was Tubulovillous adenoma with high grade dysplasia, following which complete excision of polyp along with

Adenomatous Polyp with High Grade Dysplasia and Foci of Adenocarcinoma Arising From Prolapsed Mucosa of Internal Hemorrhoids: A Case Report

prolapsed mucosa followed by Laser treatment for hemorrhoids was done. Postsurgery Contrast MRI showed no significant abnormality in rectum and anal canal and the patient is doing well.

GROSS

We received a grey brown to tan nodular mass measuring 2.3x2.3x1.5cm. Cut section was grey white.

MICROSCOPY

Section from anal canal shows squamo-columnar junction with a polyp arising from the portion lined by columnar cells (Fig 2), composed of back to back tubules and villi lined by columnar cells with elongated hyperchromatic stratified nuclei with loss of polarity and irregular nuclear membranes, many showing conspicuous nucleoli (Fig 3,4,5 & 6). Focal areas shows irregular and angulated glands surrounded by desmoplastic stroma and high grade nuclear features (Fig 7). Also noted dysplastic epithelium displaced into the submucosal area with associated surrounding lamina propria and smooth muscle proliferation consistent with mucosal prolapse (Fig 8). Submucosa shows dilated, thick walled blood vessels and vascular spaces often with thrombosis and areas of hemorrhage (Fig 9)

Base of resection was negative for dysplasia/adenocarcinoma.

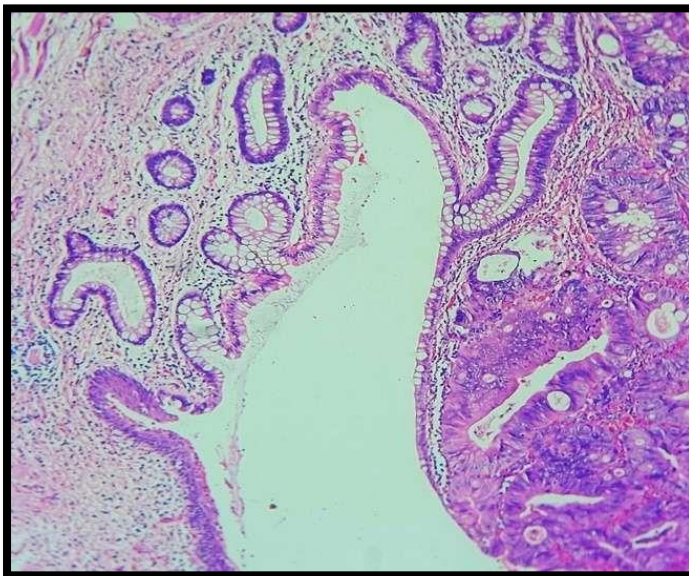


Fig 2: Adenomatous polyp arising near to squamo-columnar junction (10x)

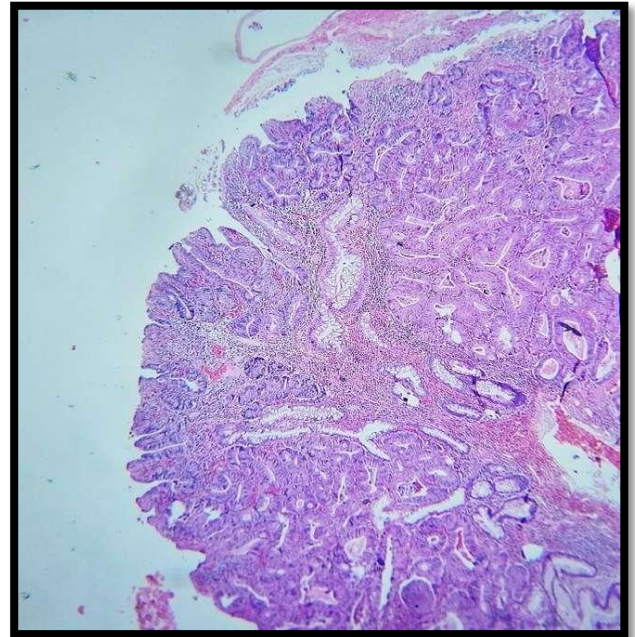


Fig 3: Tubulovillous adenoma with areas of low grade dysplasia (4x)

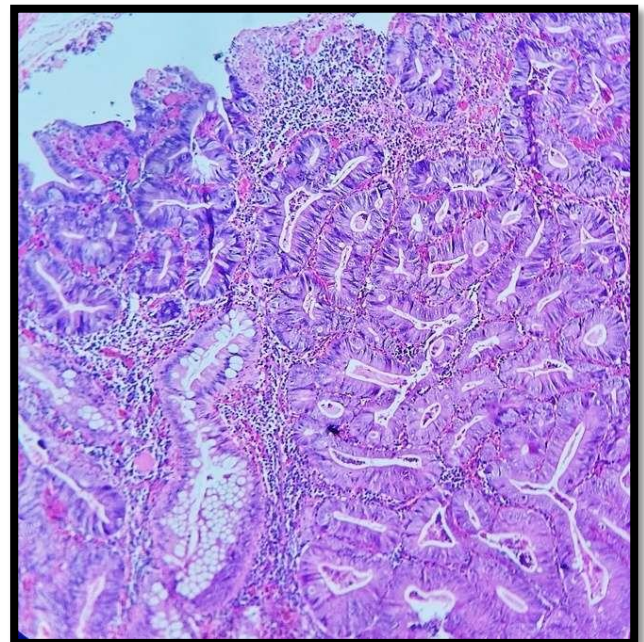


Fig 4: Tubulovillous adenoma with areas of low grade dysplasia (10x)

Adenomatous Polyp with High Grade Dysplasia and Foci of Adenocarcinoma Arising From Prolapsed Mucosa of Internal Hemorrhoids: A Case Report

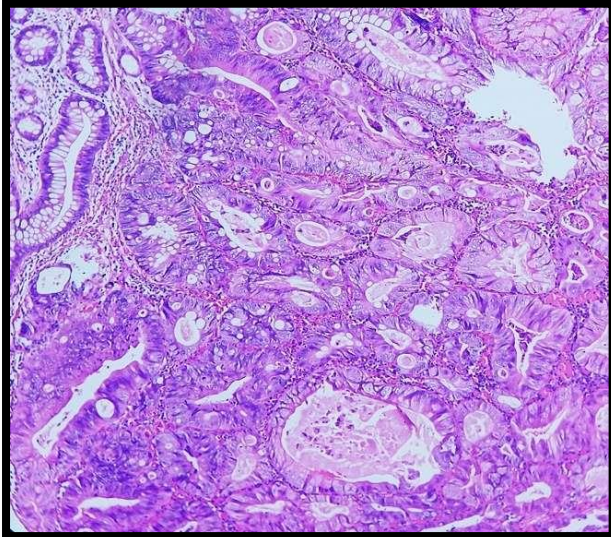


Fig 5: Tubulovillous adenoma with areas of high grade dysplasia (10x)

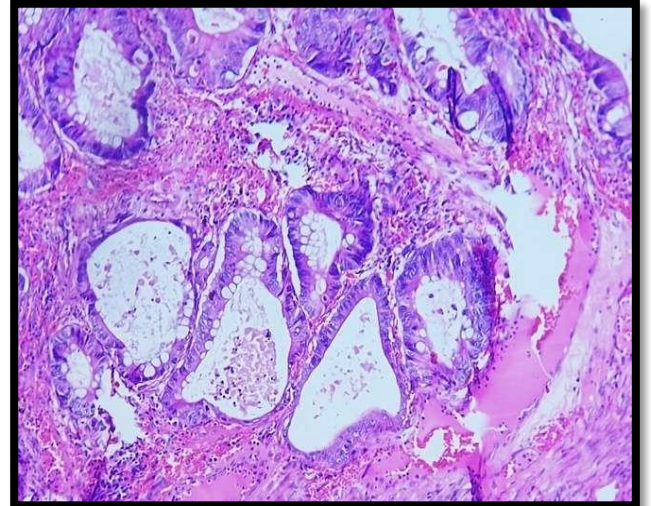


Fig 7: Microscopic focus of Adenocarcinoma (10x)

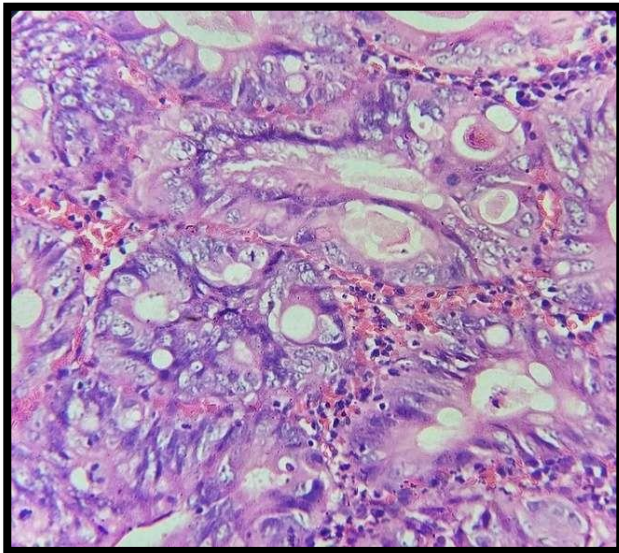


Fig 6: Tubulovillous adenoma with areas of high grade dysplasia (40x)

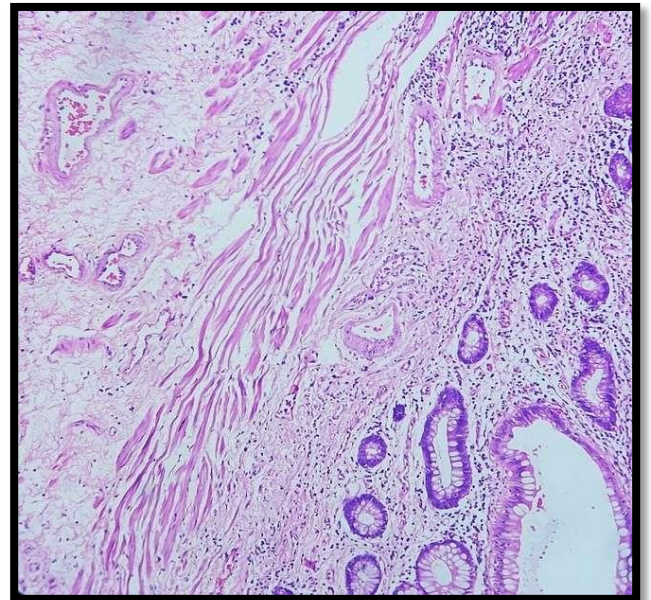


Fig 8: Areas consistent with mucosal prolapse (10x)

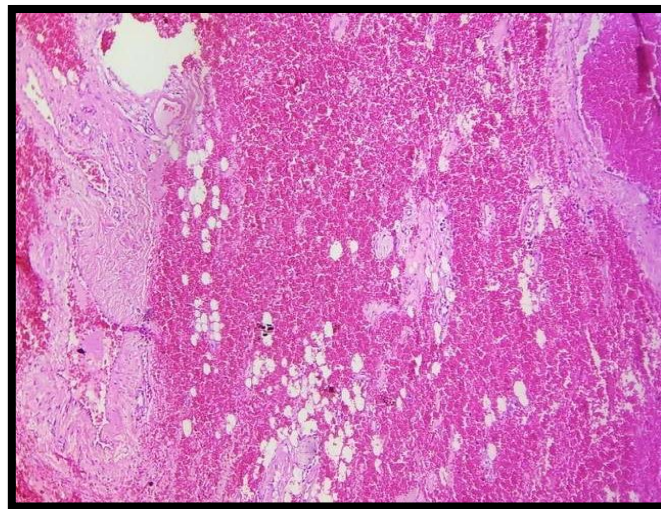


Fig 9: Dilated, thick walled thrombosed vessels and hemorrhage (10x).

Adenomatous Polyp with High Grade Dysplasia and Foci of Adenocarcinoma Arising From Prolapsed Mucosa of Internal Hemorrhoids: A Case Report

DISCUSSION

Anal canal tumors are relatively uncommon among intestinal neoplasms. Anal canal adenomas are extremely rare, but has malignant potential to transform into adenocarcinomas.

Anatomy in this area is complex; mucus membrane of upper half of anal canal is derived from endoderm of hindgut and lower part is derived from ectoderm. The former is lined by columnar cells and latter lined by stratified squamous epithelium [1]. The presentation of adenomas can vary and often mimics benign conditions like hemorrhoids as in our case, which leads to delay in diagnosis and timely treatment [2]. Especially in patients with long standing hemorrhoids, they will misinterpret the polypoidal lesion as a newly developed hemorrhoid.

Adenomas can either arise from colorectal type epithelium at proximal end of anal canal or from columnar epithelial lining of anal glands or ducts which opens into transitional zone [3]. Adenocarcinomas can arise from these adenomatous polyps. Current studies supported the concept of adenoma- carcinoma sequence in pathogenesis of anal adenocarcinomas which is well recognized in colorectal carcinogenesis [3, 4]. The predominant histological type is squamous cell carcinoma which accounts for about 90% of cases. Whereas adenocarcinomas accounts for <5-10% of anal canal carcinomas [5].

It was once thought to be due to chronic irritation, but now identified multiple risk factors including HPV, HIV, anal sexual intercourse, smoking, immune suppression [6, 7]. Anal adenocarcinoma has also been described in correlation with anal fistulae, hemorrhoids, following ileal pouch-anal anastomosis, or with inflammatory bowel disease [6].

Natural history and treatment of anal canal tumors differ from those of anal verge tumors [8]. In our case, the patient had gross & microscopic evidence of mucosal prolapse with a polyp attached to it. Microscopically, polyp was arising near to squamo-columnar junction attached by narrow stalk confirming polyp arose from anal mucosa and not from rectum.

In Anal adenocarcinoma with early T category, wait and watch strategy is considered in node negative and lack of other factors [5]. The patient is on follow up now without chemotherapy or radiotherapy.

CONCLUSION

The clinical importance to recognize and treat these adenomatous polyps at an early stage is because of their potential to transform into malignancy and lymph node metastasis. Despite this presentation the surgical literature does not routinely recommend pathological examination of all excised hemorrhoids. In instances where polyp arises from chronic hemorrhoidal lesions, consider it an alarming sign to

sample extensively to not overlook a carcinoma. Close pathological evaluation of all hemorrhoidectomy specimens should be done so that rare lesions like this are not missed.

REFERENCES

- I. Jain D, Dhawan S. Tubulovillous adenoma of the anal canal: report of 2 rare cases with review of literature. *Ann Diagn Pathol.* 2012 Jun;16(3):210-3. doi: 10.1016/j.anndiagpath.2011.01.002. Epub 2011 Mar 29. PMID: 21447446.
- II. Leonard D, Beddy D, Dozois EJ. Neoplasms of anal canal and perianal skin. *Clin Colon Rectal Surg.* 2011 Mar;24(1):54-63. doi: 10.1055/s-0031-1272824. PMID: 22379406; PMCID: PMC3140334.
- III. Nozawa H, Ishihara S, Morikawa T, Tanaka J, Yasuda K, Ohtani K, Nishikawa T, Tanaka T, Kiyomatsu T, Kawai K, Hata K, Kazama S, Yamaguchi H, Sunami E, Kitayama J, Fukayama M, Watanabe T. Metachronous tubulovillous and tubular adenomas of the anal canal. *Diagn Pathol.* 2015 Aug 7;10:139. doi: 10.1186/s13000-015-0379-9. PMID: 26249723; PMCID: PMC4528720.
- IV. Anand BS, Verstovsek G, Cole G. Tubulovillous adenoma of anal canal: a case report. *World J Gastroenterol.* 2006 Mar 21;12(11):1780-1. doi: 10.3748/wjg.v12.i11.1780. PMID: 16586552; PMCID: PMC4124358.
- V. Lukovic J, Kim JJ, Krzyzanowska M, Chadi SA, Taniguchi CM, Hosni A. Anal Adenocarcinoma: A Rare Malignancy in Need of Multidisciplinary Management. *JCO Oncol Pract.* 2020 Oct;16(10):635-640. doi: 10.1200/OP.20.00363. PMID: 33049179.
- VI. Colvin M, Delis A, Bracamonte E, Villar H, Leon LR Jr. Infiltrating adenocarcinoma arising in a villous adenoma of the anal canal. *World J Gastroenterol.* 2009 Jul 28;15(28):3560-4. doi: 10.3748/wjg.15.3560. PMID: 19630115; PMCID: PMC2715986.
- VII. Williams GR, Talbot IC. Anal carcinoma--a histological review. *Histopathology.* 1994 Dec;25(6):507-16. doi: 10.1111/j.1365-2559.1994.tb01370.x. PMID: 7698728.
- VIII. Klas JV, Rothenberger DA, Wong WD, Madoff RD. Malignant tumors of the anal canal: the spectrum of disease, treatment, and outcomes. *Cancer.* 1999 Apr 15;85(8):1686-93. doi: 10.1002/(sici)1097-0142(19990415)85:8<1686::aid-cnrc7>3.0.co;2-7. PMID: 10223561.