

# Inflammatory Cloacogenic Polyp: A Rare Case Report

Smita Surendra. Masamatti\*, Nayan Anant. Ramteerthakar, Amit Bapuso. Pandav and Alka Vikas. Gosavi

Department of Pathology, Government medical college, Miraj, Maharashtra, India

*Keywords: Mucosal Prolapse Syndrome, Malignancy, Solitary Rectal Ulcer Syndrome*

### ABSTRACT

Inflammatory cloacogenic polyps (ICPs) are considered to be part of the spectrum of manifestations of mucosal prolapse, which includes solitary rectal ulcer syndrome (SRUS), rectal prolapse, intussusceptions and rectocele. The ICP is thought to result from mucosal prolapse, which produces local trauma and ischemic injury followed by inflammation, repair and regenerative changes. The estimated annual incidence of ICPs is 1 to 3.6 per 1, 00,000 among all solitary rectal ulcers. Here we present a case of forty year old woman who presented with recurrent rectal bleeding, passing of mucus in stools and altered bowel habits since 1 and half years. Surgical resection of the polyp was done and the histopathological findings were consistent with ICP. Hence ICPs should be considered in the differential diagnosis of anorectal lesions.

**\*Corresponding author:**

Dr Smita Surendra. Masamatti, DQ 14, Staff quarters, Saphagiri Medical college and Hospital. Chikkasandra, Hesargatta Main road, Bangalore 560090. India

Phone: +91 9741147555

E-mail: [smitamas@yahoo.co.in](mailto:smitamas@yahoo.co.in)



## Introduction

ICPs are benign lesions arising from the transitional zone of the anorectal junction and may macroscopically resemble anorectal malignancies.<sup>[1]</sup> It was first described in 1981 as an unusual polyp of the anus. The term “mucosal prolapse syndrome” was proposed by du Boulay et al in 1983 to describe the characteristic features of the lesions, solitary rectal ulcer and related disorders which are thought to share mucosal prolapse as the underlying pathogenic mechanism.<sup>[2]</sup> In this report we describe another case of ICP with all typical histopathological features.

## Case Report

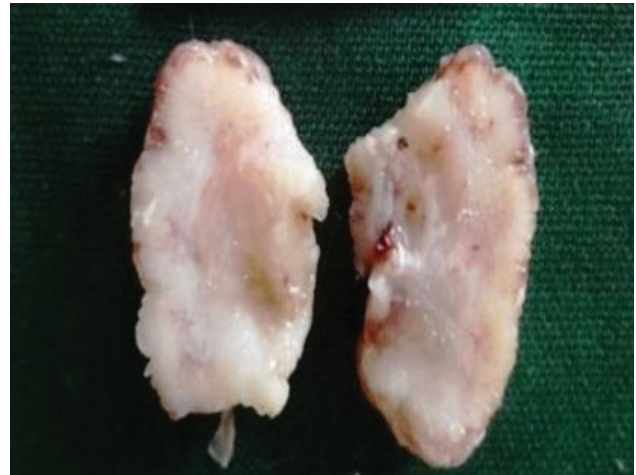
A forty year old female presented with complaints of recurrent rectal bleeding, passing of mucous in stools and altered bowel habits, on and off since one and half years. On per rectal examination, there was no evidence of hemorrhoid or mucosal prolapse. A presumptive diagnosis of inflammatory bowel disease was given and was treated symptomatically. But later on the symptoms were aggravated and sigmoidoscopy was advised. The scopy findings revealed a single, soft, fleshy, sessile polyp arising from the anterior wall of rectum. Following this, colonoscopy was done to rule out similar lesions in rest of the intestine. The colonoscopy and other routine investigations were within normal limits. Cervical Pap smear was taken to rule out HPV associated intraepithelial lesion and it didn't reveal any abnormality. Surgical resection of the polyp was done and was sent to histopathology section. Following excision, there has not been any history of recurrences during a follow up period of 6 months.

**Gross examination:** The polyp was sessile, irregular, grey white in color with a rough surface and measured 2.8x1.2x0.5 cms. The cut surface showed whitish appearance (Figure 1). Grossly it was diagnosed as adenomatous polyp.

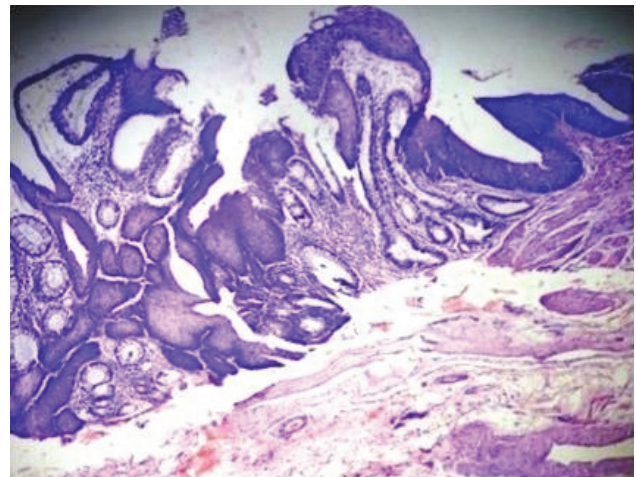
**Microscopic examination:** Sections studied showed a polyp covered by both squamous and columnar epithelium (Figure 2). It showed a villiform configuration with surface ulceration and was covered with fibrinous exudates (Figure 3). Within the stroma, there was central splaying of fibres of the muscularis mucosae and showed fibromuscular obliteration of the lamina propria (Figure 4). There was no evidence of dysplasia in the lining epithelium or in the glands.

## Discussion

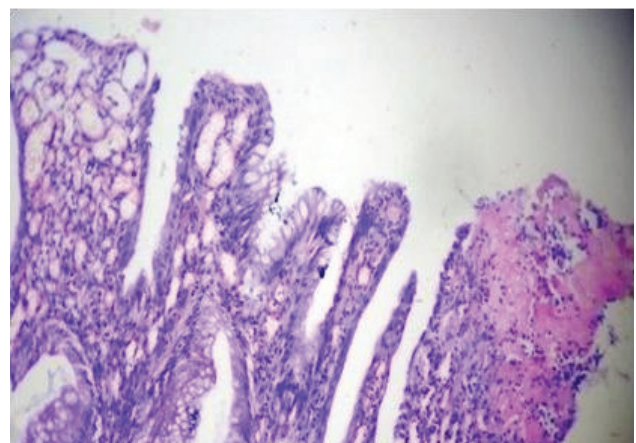
Inflammatory cloacogenic polyp is a rare type of anorectal polyp that was first described in literature by Lobert and Appleman in 1981. It is a very rare anorectal lesion as the estimated annual incidence is around 1 to 3.6 per 1,



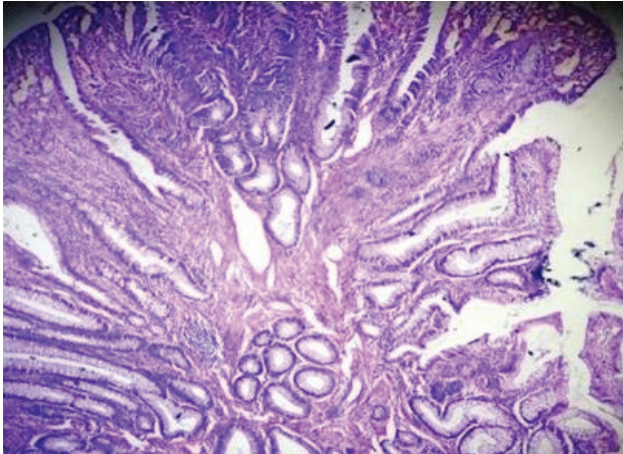
**Fig. 1:** Gross picture of the polyp showing homogenous whitish appearance on cut surface.



**Fig. 2:** Microphotograph of polyp showing both squamous and columnar lining epithelium (H and E, X40).



**Fig. 3:** Microphotograph showing villiform configuration of glands with focal mucosal ulceration (H and E, X100).



**Fig. 4: Central splaying of muscularis mucosae fibers in lamina propria (H and E, X100).**

00,000 among all solitary rectal ulcers. [3] ICP is thought to result from mucosal prolapse which produces local trauma and ischemic injury followed by inflammation, repair and regenerative changes. [2]

ICPs prolapse because of the malfunction of the internal anal sphincter and smooth muscle of rectum. [4] The lesions are more common in women during the third and fourth decade of life, as seen in our case; however, Poon et al and Washington K have reported ICPs occurring in children aged between 8 to 15 years. [5,6] ICPs are located usually at the anterior wall of anorectal junction but Scott H previously reported in his case series that they can arise from anterior, posterior or even anterolateral wall of rectum. Previous studies done by Scott H and Lobert and Appleman showed associated lesions such as SRUS/prolapse, Crohn's, hemorrhoids and adenocarcinoma along with ICP, but in our case there were no associated findings. [7]

Microscopically the present case showed all the features of ICP. The lining epithelium or glandular epithelium did not show any evidence of dysplasia in our case, while I.M.Hanson reported a case of intraepithelial neoplasia in ICP which was associated with HPV. [2] There are reports of squamous cell carcinoma in situ and invasive squamous cell carcinoma arising in ICP. These cases showed association with HPV 16 which was demonstrated by PCR. The markers p53 and ki 67(MIB-1) have been suggested to be used in challenging histopathological cases of dysplasia. [1] Anal intraepithelial neoplasia shows similarities with cervical intraepithelial neoplasia being associated with HPV infection and multifocal female genital intraepithelial neoplasms. [2]

The differential diagnosis consists of both malignant and benign lesions. Malignant lesions include carcinomas of

the anus and rectum. Benign lesions include submucosal lesions of the colon like fibroblastic polyps, Peutz Jeghers polyp, adenomas with secondary prolapse and SRUS, inflammatory cap polyps and inflammatory myoglandular polyps. [1] In ICPs, the smooth muscle surrounds individual crypts while in Peutz Jeghers, the prominent arborizing smooth muscle bundles surrounds groups of crypts. The lack of dysplastic nuclear changes readily distinguishes these inflammatory polyps from tubular and villous adenomas. [3] The fibroblastic polyp, which may also show epithelial serration, but epithelial and inflammatory components are less pronounced. The lamina propria proliferation is fibrocollagenous, rather than fibromuscular, a feature which may be highlighted with use of a trichrome stain.

Other entities like inflammatory fibroid polyps, mucosal ganglioneuromas and leiomyomas of the muscularis mucosae are unlikely to be confused with polypoid mucosal prolapse, given the lack of an epithelial component, but may be distinguished Immunohistochemically if required. [8] A few cases with histological changes identical to mucosal prolapse syndrome have been described in association with an invasive carcinoma, most of which were detected in superficial biopsy and the carcinoma was infiltrating the underlying submucosa. The mechanism for the mucosal prolapse like changes is postulated to be localized ischemia related to the malignancy.

Surgical excision along with correction of prolapse is the most common path of treatment. [4]

## Conclusion

ICPs could be the first manifestation of Crohn's disease or associated with a more proximal adenocarcinoma. ICPs may mimic adenomas and anorectal malignancies macroscopically, endoscopically and histologically. Hence pathologists must be cautious in evaluating ICP because of the frequent findings of crypts displaced into the submucosa. In case of ICPs with anal intraepithelial neoplasia, long term follow up of the patient should be kept. The pathologists, clinicians and Endoscopists must be aware that although ICP is often associated with SRUS/mucosal prolapse, it may also occur in other clinical settings.

## Acknowledgements

None

## Funding

None

## Competing Interests

None

**Reference**

1. Kalogerinis PT, Morfesis FA, Georgakila S, Georgakilas AG. Correction of anal prolapse associated with resolution of cloacogenic polyp lesions. Implications to anorectal cancer. *J Biochem Tech* 2009; 1(2):62-4.
2. Hanson IM, Armstrong GR. Anal intraepithelial neoplasia in an inflammatory cloacogenic polyp. *J Clin Pathol* 1999; 52(5):393-4.
3. Iacobuzio-Donahue, C.A, Montgomery, E.A. Epithelial neoplasms of the colorectum. 2<sup>nd</sup> ed. Philadelphia. In: John R. Goldblum, editor. *Gastrointestinal and liver pathology*, ELSEVIER SAUNDERS; 2005. pg 410-40.
4. Calva-Rodriguez R, Gonzalez-Palafox MA, Rivera-Dominquez ME, Garcia-Salazar JM, Calva-Cerqueria BcD. Inflammatory cloacogenic polyp. *Rev Gastroenterol Mex*. 2007; 72(4):371-5.
5. Poon KK, Mills S, Booth IW, Murphy MS. Inflammatory cloacogenic polyp: an unrecognized cause of hematochezia and tenesmus in childhood. *J pediatr*. 1997; 130(2):327-9.
6. Washington K, Rourk MH, McDonagh D, Oldham KT. Inflammatory cloacogenic polyp in a child: part of the spectrum of solitary rectal ulcer syndrome. *Pediatr Pathol* 1993; 13(4): 409-14.
7. Saul SH. Inflammatory cloacogenic polyp: Relationships to solitary rectal ulcer syndrome/ mucosal prolapsed and other bowel disorders. *Human pathology* 1987; 18(11): 1120-25.
8. Parfitt JR, Shepherd NA. Polypoid mucosal prolapse complicating low rectal adenomas: beware the inflammatory cloacogenic polyp! *Histopathology*. 2008; 53(1):91-6.