



## Case Report

### Isolated Duodenal polyp presenting as upper gastrointestinal bleed

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#### ABSTRACT

Duodenal polyps are rare lesions in patients undergoing upper GI endoscopy (UGIE), and the prevalence varies widely with range of 0.3-4.6% of cases. Duodenal adenomas are most commonly associated with familial adenomatous polyposis. Solitary duodenal adenomas (SDA) is very rare and presentation as upper gastrointestinal (GI) haemorrhage is a rare manifestation. We herein report a case of adult female patient presenting to Emergency Department with features of upper GI bleeding. Patient was resuscitated following which UGIE was done. UGIE revealed a duodenal polyp and endoscopic polypectomy was done. Subsequent colonoscopy was done and was normal. The histopathological examination of the polypectomy specimen revealed tubular adenomatous polyp which is a premalignant condition. We also emphasise on clinical presentation, histological types and treatment modalities available in the literature. However, there is lack of consensus regarding the outcome of various procedure described in the literature.

**KEYWORDS:** Isolated duodenal polyp, upper gastrointestinal bleed, endoscopic polypectomy.

#### INTRODUCTION

Duodenal polyps are seen in 0.3–4.6% of patients attending for upper gastrointestinal endoscopy [1]. Duodenal polyps can be seen in association with familial adenomatous polyposis (FAP) or can be sporadic, association with FAP being seen in about 90% of the cases [2]. Duodenal polyps are usually asymptomatic, but may present with abdominal pain, upper gastrointestinal bleeding or anemia. Nonampullary solitary duodenal adenomas (SDA) are those which arise in patients without a known polyposis syndrome. They are usually solitary and the majority are sessile or flat rather than pedunculated[3].

Around 80–90% of SDAs are found in the second part of the duodenum [4]. These morphological features plus their tendency to grow along folds, make their diagnosis more difficult as compared to colonic adenomas and may be missed by the untrained eye. The risk of malignant transformation of SDAs is lower than that of duodenal adenomas in patients in FAP, these lesions do carry malignant potential and removal is recommended.

Historical case series of surgically resected adenomas in symptomatic patients show cancer prevalence rates in the

resected polyps of between 33% and 47%. The risk of carcinomatous change in an asymptomatic group with duodenal adenomas detected at endoscopy is harder to quantify, but is likely to be far lower [5].

Here, we report a rare case of 45 year old lady who presented to us with history of passing black coloured stool, who was subjected to upper gastrointestinal endoscopy after resuscitation, which revealed a 2 cm sessile polyp in the 2<sup>nd</sup> part of duodenum. Endoscopic polypectomy was performed, which on HPE showed tubular adenomatous polyp with mildly distorted villous structure and tubular hyperplasia of the glands.

#### CASE REPORT

A 45-year-old female patient presented with history of passing black coloured stool for 10 days. Clinically, there was pallor with documented haemoglobin of 6.1 gm%. Patient was resuscitated with intravenous fluids and two units of packed red blood cells. Other routine blood investigations were normal. Once the patient was haemodynamically stable, UGIE was performed which showed a 2cm sessile polyp in the second part of the duodenum [Fig-1]. Endoscopic polypectomy was performed

and specimen was subjected to the histopathological examination (HPE).

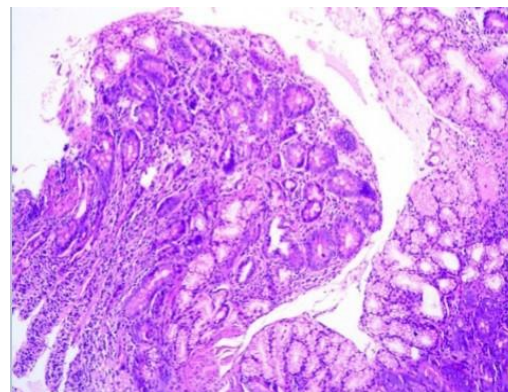
Colonoscopy did not reveal any significant pathology. Upper gastrointestinal endoscopic re-assessment was done three hours after polypectomy to confirm haemostasis at the polypectomy site. Postprocedure pneumoperitoneum was

ruled out by abdominal imaging. HPE of excised specimen showed tubular adenomatous polyp with mildly distorted villous structure and tubular hyperplasia of the glands, focal mild dysplasia of the glandular epithelium and mild inflammatory cell infiltration in the lamina propria [Fig-2].

**Figure1: UGIE showing sessile duodenal polyp**



**Figure 2: tubular structures lined by dysplastic cells**



## DISCUSSION

Sporadic duodenal polyps can be classified according to their histopathological subtype and location, which includes [6]: a) Nonampullary sporadic adenoma, b) Ampullary sporadic adenoma, c) Brunner's gland adenoma, d) Gastric heterotopia, e) Lipoma, f) Leiomyoma, g) Carcinoid, h) Gastrointestinal stromal tumors and i) Solitary Peutz-Jeghers polyps. Nonampullary duodenal adenomas are relatively common in familial adenomatous polyposis, but nonampullary sporadic duodenal adenomas are quite rare. Duodenal polyps may present as dyspepsia, abdominal pain, upper gastrointestinal bleeding or obstruction. Most of the sporadic duodenal adenomas are flat and sessile and occur in the 2nd part of the duodenum, peak incidence of which is between 6th and 8th decades of life.

Patients with duodenal adenomas carry an increased risk of colonic neoplasia and should be subjected to colonoscopy [7]. American Society for Gastrointestinal Endoscopy Guideline on "The role of endoscopy in ampullary and duodenal adenomas" suggests, screening colonoscopy to all patients who have duodenal or ampullary adenomas [8].

Treatment of duodenal adenomas depends on their location, size, and degree of dysplasia. Rapidly increasing size, severe dysplasia or villous change suggests that intervention is necessary [9]. Historically duodenal adenomas have been managed by radical surgery or more conservative local surgical excision. However, these approaches have carried significant morbidity and mortality risks, plus a high recurrence rate following local excision. For these reasons, endoscopic management of duodenal adenomas has become increasingly popular. Endoscopic approach offers considerable advantages in terms of organ preservation, risks, recovery and length of hospital stay.

There are certain anatomic characteristics of the duodenum that make endoscopic resection of duodenal lesions challenging.

These factors include: a) narrow lumen, b) C-loop that makes maintaining endoscope position difficult, c) Brunner's glands in the submucosal layer that stiffen the wall and make mucosal lifting difficult, d) Thin deep muscle layer that results in a higher rate of perforation, and e) Additionally, the duodenum has an extensive vascular network supplied by the gastroduodenal artery that increases the risk of bleeding, which can be severe and potentially life threatening. Surgery remains the standard treatment for large and complex nonampullary SDA which are technically impossible to remove using endoscopic techniques. Surgical procedures include [10],[11]: a) transduodenal excision, b) wedge resection, c) pancreas preserving segmental duodenectomy and d) pancreaticoduodenectomy.

The only curative treatment appears to be a pancreaticoduodenectomy. But such an operation has considerable potential morbidity and mortality which makes the indication for and the timing of surgery extremely difficult. In addition to standard surgical resection, the literature describes other options of endoscopic therapy like polypectomy, mucosectomy and argon plasma coagulation (APC) –all of which show good results with few complications [12].

Techniques of endoscopic removal of duodenal adenomas are generally similar to those of colonic polyps. Adjuvant therapies can be used, as APC or electrocoagulation to destroy residual or recurrent adenomatous tissue not removed during attempts at primary snare resection [13]. Complications after endoscopic resection of duodenal adenomas include perforation, bleeding and complications related to sedation.

In our case, we did not encounter any procedure related complications which was confirmed by UGIE and abdominal imaging. It is recommended that all patients who have undergone endoscopic resection of duodenal adenomas be considered for surveillance endoscopy for the detection and treatment of recurrence [14]. In our case follow up was done every 3 months for a period of 24 months which did not reveal any features of recurrence.

## CONCLUSION

Isolated duodenal polyps though rare, can occur sporadically. Endoscopic polypectomy is one of the accepted treatment modality with good outcome. However, there is no consensus regarding treatment modalities which keep the clinicians in dilemma. As the aggressive behaviour of duodenal adenomas is variable, frequent and long term endoscopic surveillance is mandatory.

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