

Pouch - Endoscopic Examination in patients with Ileal Pouch Anal Anastomosis (IPAA) - Full UHDB Clinical Guideline

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Abbreviations

UC: Ulcerative Colitis

CD: Crohn's Disease

IPAA: Ileal Pouch Anal Anastomosis

FAP: Familial Adenomatous Polyposis

The purpose of this guideline is to standardise pouch endoscopy reporting with consistency. J pouch assessment is detailed as it is the commonly encountered pouch type.

1. Pouch anatomy and types of IPAA

- J Pouch
 - This is the most commonly formed pouch, constructed from a double loop of ileum each measuring about 20cm
 - Two limbs are identifiable (efferent limb with a blind end- tip of the J and afferent limb)
 - It has a characteristic 'owl's eye' appearance
 - Patients have higher frequency of bowel emptying
- W Pouch
 - This is made from 4 loops of ileum to create a reservoir with greater capacity to minimise frequency of defaecation
- S Pouch
 - This is made from 3 loops of ileum folded back side to side and the efferent outflow tract connected to the anus
- Kock Pouch
 - Rarely performed
 - Intra-abdominal reservoir in patients with permanent ileostomy
 - Also known as 'continent ileostomy'

2. Endoscopic assessment and biopsies

- Pouchoscopy is indicated in patients with:
 - symptoms of pouch dysfunction (to diagnose pouchitis)
 - assessing response to therapy
 - surveillance and
 - dilatation of symptomatic strictures
- Assessment of pouches during endoscopy should include documentation of specific anatomical sites and parameters that could be contributing to pouch dysfunction (for example cuffitis).
- The type of pouch should be confirmed before procedure (majority of the pouches are of J- type. If a pouch was made within the last 20 years at Derby it will be a J pouch)
- A slim colonoscope (ideally paediatric colonoscope) is recommended because of its smaller calibre and better manoeuvrability. Retroflexion is easier with paediatric scope as the pouch- anal anastomosis can be narrower.
- Avoid intubating too proximally beyond the pouch as the proximal site of ileostomy can be scarred.
- Standard bowel preparation is enema. Sedation is not usually required.
- Anal sphincter tone should be checked during rectal examination (useful in excluding sphincter dysfunction)
- Patients with known stricture at the anal anastomosis may benefit from sedation. Do not assume CD as it might be due to previous surgery.
- Keep air insufflation to a minimum. The normal functioning J pouch has an 'owl's eye' configuration on inflation, with one 'eye' leading to the afferent limb (and the proximal bowel) and the other to the tip of the J pouch, with a long sharp 'beak' of mucosa between the two. Avoid overinflation as the capacity of the pouches are limited and any underlying fibrosis will limit the compliance further.

- Good expansion and contractility of the inlet and the tip of the J pouch should be demonstrable.
- The pouch- anal anastomosis should be identified to differentiate the rectal cuff from the pouch body
- **Type of anastomosis and presence of rectal cuff:** A stapled anastomosis (Fig 3b) has a short residual cuff of the rectal mucosa as opposed to a handsewn anastomosis (Fig 3a) where the anastomosis is right down to the dentate line (ie. no residual cuff is present). This information might be useful in assessing for the cuff during pouchoscopy and diagnosing cuffitis. The majority of anastomoses are stapled.
- Retroflexion allows better visualisation of the rectal cuff (if the pouch or cuff is not severely inflamed)
- The pre-pouch ileum should be intubated to confirm complete pouchoscopy has been achieved
- Examination of the rectal cuff could be missed if the scope is withdrawn quickly through the anal canal
- **Biopsy protocol:**
 - Biopsies are required from the afferent limb (4 specimens) routinely and from the rectal cuff if present (4 specimens), even if the mucosa looks normal to assess histological activity
 - If cuffitis is suspected, biopsies from the rectal cuff should be submitted separately from pouch biopsies
 - Small ulcers and/or erosions along the staple line do not necessarily indicate pouchitis and therefore biopsies are not usually required from this area
 - Foreign body granulomas can occur along suture/ staple lines and biopsies should be avoided

3. Structured reporting

- The following landmarks should be identified, photographed and reported in a J pouch:
 - Pouch inlet and body (akin to the rectal region in normal anatomy)
 - Efferent limb
 - Tip of the J (in J pouch, blind end)
 - Afferent limb leading proximally to the terminal ileal mucosa
 - Pouch outlet on withdrawal of the scope and retroflexed image (to demonstrate dentate line/ anal transition zone/ rectal cuff)
- Assessment and reporting should focus on the following parameters:
 - configuration, distensibility of the pouch body
 - severity, extent and distribution of mucosal inflammation if any, and
 - presence of backwash ileitis, cuffitis or inflammatory polyps.

4. Endoscopic features of different types of pouchitis

- Chronic idiopathic pouchitis (commonest type)
 - Variable spectrum from mild (erythema) to severe inflammation
 - Generalised inflammation
 - Patchy inflammatory changes also seen
 - Distortion of the owl's eye configuration
 - Poor distensibility of the pouch on inflation
- Ischaemic pouchitis
 - Asymmetric distribution of inflammatory pattern
 - Only half of the pouch shows inflammation with sparing of the efferent limb
 - Inflammation in distal half to quarter of the pouch body or at one limb of the pouch body sparing the rest of the pouch
 - Sharp demarcation of inflamed and normal mucosa
 - Usually involves the afferent limb
- Crohn's disease (CD) of the pouch
 - Segmental inflammation often seen
 - Strictures can be seen at the inlet or afferent limb
 - Presence of fistulae (perianal/ pouch- vaginal/ internal)
 - Inflammation of the pre-pouch ileum that extends well beyond 10 cm above the pouch
- Pre-pouch ileitis
 - Distinct histological entity from CD
 - Occurs in patients with concurrent pouchitis
 - Not always symptomatic
 - Similar to backwash ileitis in UC

5. Pouchoscopy surveillance recommendations

- Risk of neoplasia in pouches is low, with cancer risk of 0.02% at 20 years
- Cancer may arise from the rectal cuff, the pouch or separately from the anal mucosa
- Yearly surveillance is recommended for the following group of patients at increased risk for dysplasia or cancer:
 - Colorectal carcinoma or dysplasia in the colectomy specimen
 - Primary Sclerosing Cholangitis
 - Chronic pouchitis with type C ileal pouch mucosa (moderate to severe villous atrophy, severe pouchitis occurring rapidly after pouch formation)
 - Long retained rectal cuff
- In the absence of above risk factors, the benefits of surveillance are uncertain and should be discussed with the patient.

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Document Controls

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