



## CHRONIC REFRACTORY POUCH DYSFUNCTION

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Pouchitis represents a disease spectrum with various pathogenetic pathways, clinical presentations, and disease courses, ranging from acute antibiotic-response to chronic antibiotic-refractory phenotypes. For each individual patient, in addition, the diagnosis of pouchitis or other pouch disorders can be a moving target. Therefore, patients with ileal pouch-anal anastomosis (IPAA) should be closely monitored.

Pouchoscopy is the best way to monitor the disease status of the pouch, to grade the degree of inflammation, and to identify structural abnormalities. Patients with minimum symptoms, but with endoscopic inflammation, should still be treated, to minimize smoldering inflammation causing chronic "stiff" pouch with transmural inflammation, which can result in pouch failure. More importantly, different treatment strategies should be applied to treat different phenotypes of pouchitis at different stages.

Pouchoscopy, the diagnostic test of choice, needs to be performed, along with laboratory evaluation. In most cases, the combined evaluation of endoscopy, histology, and laboratory testing often provides clues for triggering or etiological factors for the flare up. For patients with diffuse pouchitis and diffuse enteritis of the afferent limb, immune-mediated pouchitis/enteritis may be considered. For patients with pouch inflammation that is asymmetrically distributed and has a sharp demarcation of inflamed and non-inflamed parts, ischemic pouchitis is a possibility. Often pouchoscopy may show clues to structural abnormalities, such as strictures, fistulas, and sinuses. If Crohn's disease (CD) of the pouch is suspected, abdominal and pelvic imaging or examination under anesthesia is often needed. A molecular classification of pouchitis, with a combined assay of immunogenetic, serological, and clinical markers, would be invaluable for the identification of etiopathogenesis, diagnosis, treatment stratification, and prediction of prognosis.

The treatment of antibiotic-responsive pouchitis is straightforward. The prognosis of pouchitis is determined by the frequency of need for antibiotic therapy (antibiotic-dependent pouchitis) and the development of a refractory disease course in chronic antibiotic-resistant pouchitis (CARP). A prolonged course of dual antibiotic therapy may help induce the remission in patients with CARP. Oral or topical mesalamine agents and a topically-active corticosteroid agent (budesonide) are the preferred first-line drugs for immune-mediated pouchitis/enteritis. Back-up agents may include immunomodulators or anti-tumour necrosis factor agents.