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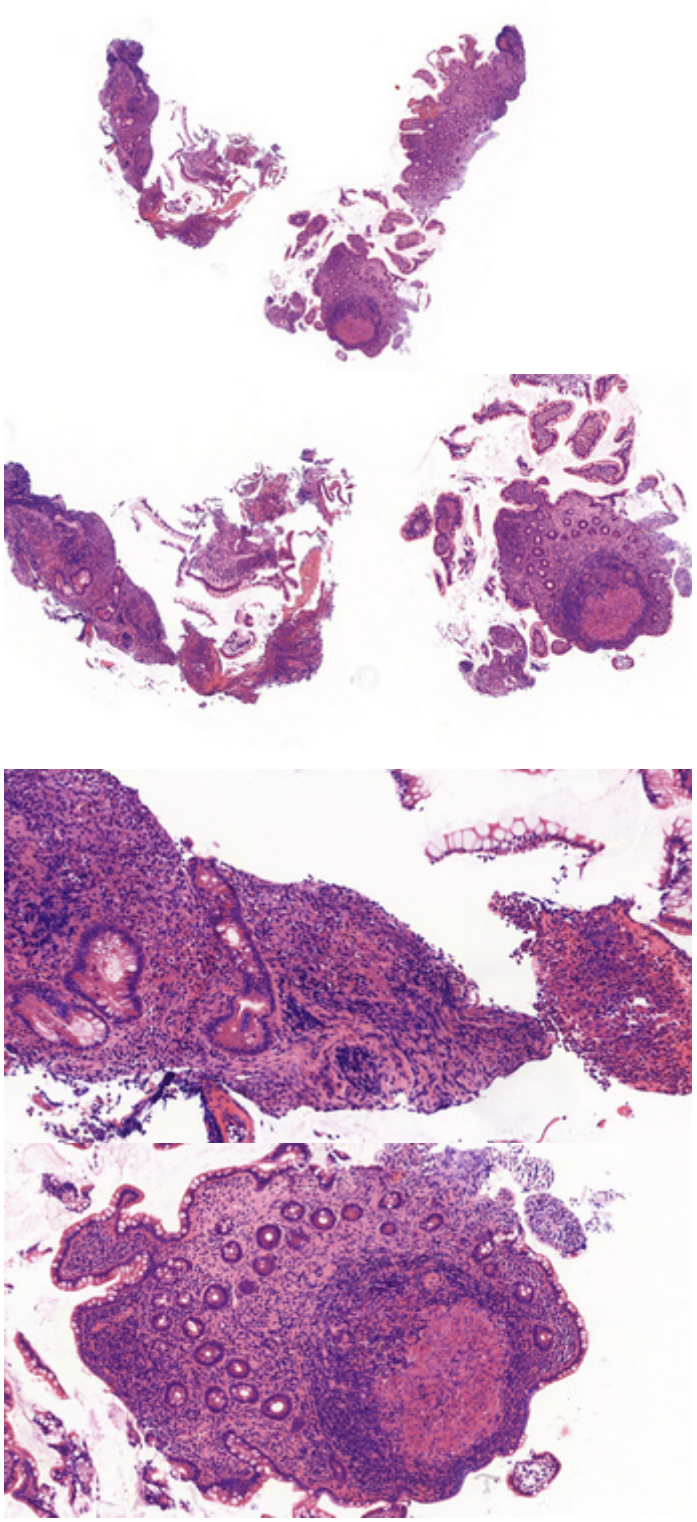
35-year-old male patient, pouch biopsy.

What is your diagnosis?



Diagnosis:

Chronic active pouchitis with epithelioid cell granuloma.

Comment:

Microscopic examination showed the infiltration of the lamina propria with lymphocytes, plasma cells and neutrophil granulocytes in the pouch biopsy [Panels A and B]. Focal erosions, villous and crypt architectural distortion [Panel C], and epithelioid cell granulomas [Panel D] were also present. Specific pathogens, signs of ischemia and dysplasia were not identified, cytomegalovirus immunohistochemistry and acid-fast staining were negative. Prepouch ileum and cuff biopsies were unremarkable.

The diagnosis of ulcerative colitis was established from one superficial rectal biopsy in 2004. Six years later terminal ileum, ascending colon, transverse colon, descending colon and rectal biopsies revealed a clinically steroid resistant severely active ulcerative pancolitis and the patient underwent ileal pouch-anal anastomosis surgery. Pathological workup of the resection specimen showed classic morphology of fulminant ulcerative pancolitis without any Crohn's disease specific features. After the surgery, the patient had recurrent episodes of chronic antibiotic resistant pouchitis with fistulas.

Ileal pouch-anal anastomosis or J-pouch surgery refers to a surgical treatment of severely active steroid and biological therapy resistant ulcerative colitis or familial polyposis syndromes whereby stomas can be avoided. Inflammation of the reservoir area can be divided to praepouch ileitis, pouchitis and cuffitis (inflammation of rectal remnant). Pouchitis refers to the inflammation of the ileal pouch itself and can be categorized clinically to antibiotic-responsive, antibiotic-dependent and antibiotic-refractory, and classified histologically as active, chronic and chronic-active. The diagnosis of pouchitis in based on clinical symptom assessment, endoscopic and histologic evaluation. Although endoscopic and clinical scoring is more effective in grading the severity of pouchitis, biopsies are useful in assessing the presence of specific etiological factors such as infectious agents (e.g. cytomegalovirus inclusions), signs of ischemia, etc. Occasionally transmural inflammation, fissures, fistulas, strictures, and even granulomatous inflammation can occur in the pouch of patients with ulcerative colitis. These histological changes could raise the possibility of Crohn's disease involving the pouch mucosa. In such cases, the histological picture must be correlated to the previous biopsies and resection specimens in order to differentiate pouchitis with transmural inflammation or granulomas from Crohn's disease. The diagnosis of ulcerative colitis should only be changed if pathognomonic features of Crohn's disease can be identified by reevaluating the prior specimens. Granulomas in a patient without any evidence of Crohn's disease may be related to infectious agents, foreign material or mucin extravasation.

For further reading:

- Liu ZX, Deroche T, Remzi FH, et al. Transmural inflammation is not pathognomonic for Crohn's disease of the pouch. Surg Endosc. 2011;25:3509-3517.
- Weber CR, Rubin DT. Chronic pouchitis vs. recurrent Crohn's disease: a diagnostic challenge. Dig Dis Sci. 2013;58:2748-50.
- Zeos P, Saibil F. Inflammatory pouch disease: the spectrum of pouchitis. World J Gastroenterol. 2015;21(29):8739-52.

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