Filiform Polyposis of the Colon
First Report in a Case of Transmural Colitis (Crohn's Disease)

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Filiform polyposis of the colon, an unusual distinct pathological entity, is characterized by multitudinous, uniform, slender, vermiform projections of mucosa and submucosa, occasionally having an arborescent arrangement. These "polyp stalks without polyps" have only previously been reported in colons subsequent to a long quiescent period of clinically limited episodes of ulcerative colitis (1). In contrast with the previous report, this case arose in an instance of transmural colitis (Crohn's disease) of the colon after 16 symptomatic years. The purpose of this article is to alert clinicians that this unusual complication of colitis does not have a reported coincidence of carcinoma and is not in itself an indication for colectomy.

CASE REPORT

A 30-year-old man with a 16-year history of continuous inflammatory bowel disease was electively admitted for proctocolectomy and ileostomy. Immediately following every meal he experienced severe lower abdominal cramps which were relieved by the production of explosive loose stool. Every night he was awakened two or three times by the urgency of defecation. On occasion he noted the presence of bright red blood in the stool. Over these years there was considerable growth retardation and weight loss. Despite the debilitation caused by his disease, he never sought medical attention until several months prior to admission. A 2-month course of steroid therapy was abandoned due to peptic ulcer symptoms.

There was no history of skin rash, visual symptoms, arthralgias, or arthritis. An episode of icteric hepatitis at age 25 was attributed to heroin use; there had been no use of "hard drugs" for the past two years. Past surgical corrections included congenital pyloric stenosis and an inguinal hernia. There was no family history of diabetes or inflammatory bowel disease.

On admission to Tucson Medical Center the patient appeared cachectic and chronically ill. Appropriate surgical scars were noted on the nontender abdomen. Liver and spleen were not palpable. Bowel sounds were judged to be normal. Rectal examination yielded no positive findings. Laboratory evaluation included normal complete blood count save for microcytosis, sedimentation rate of 30 mm/hr, and normal chemistry survey except for a BUN of 22 mg/100 ml. Barium enema (Figure 1) suggested normal rectal mucosal pattern. Above this region, there were continuous zones of shortened bowel with strictured lumina separated by dilated colonic segments in the sigmoid and splenic flexures. Cobblestone-like mucosal deformities were ascribed to pseudopolyp formation. Barium swallow study suggested involvement of the distal 3 cm of ileum. Summary interpretation was advanced granulomatous colitis and terminal ileitis. Following ileoprotocolectomy, the patient was dismissed on his 10th hospital day.

The resected colon and terminal ileum consisted of stiff indurated contracted bowel with dilated sigmoid and splenic flexures. Marked serosal injection was generally present except in the rectum. Transection of the bowel wall demonstrated innumerable wormlike projections ranging in length from 0.3 to 4.5 cm (Figure 2). Polyps were present in the terminal ileum, proximal appendix, and colon, except rectum. There was striking uniformity to each polyp's diameter throughout its length. Occasionally several arose from a trunk in an arborescent pattern (Figure 3). In general the nonpolypoid mucosa was grossly free of ulceration. Colonic muscular tunics were markedly thickened.

Moderate interglandular edema and mild chronic inflammatory infiltrates were present in both the mucosa of the polyps and the uninvolved mucosa. Polyp stalks consisted of submucosal elements including focally hyperplastic muscularis mucosae, dilated arterial and venous channels, mild edema, and minimal inflammatory cell infiltrates (Figure 4). Interpolypoid mucosa was generally intact, but occasionally had small active ulcers and random vertical fissure formation. Hallmarks of transmural colitis (Crohn's disease) were lymphoid aggregates in the submucosa, muscularis, and serosa; edematous sub-

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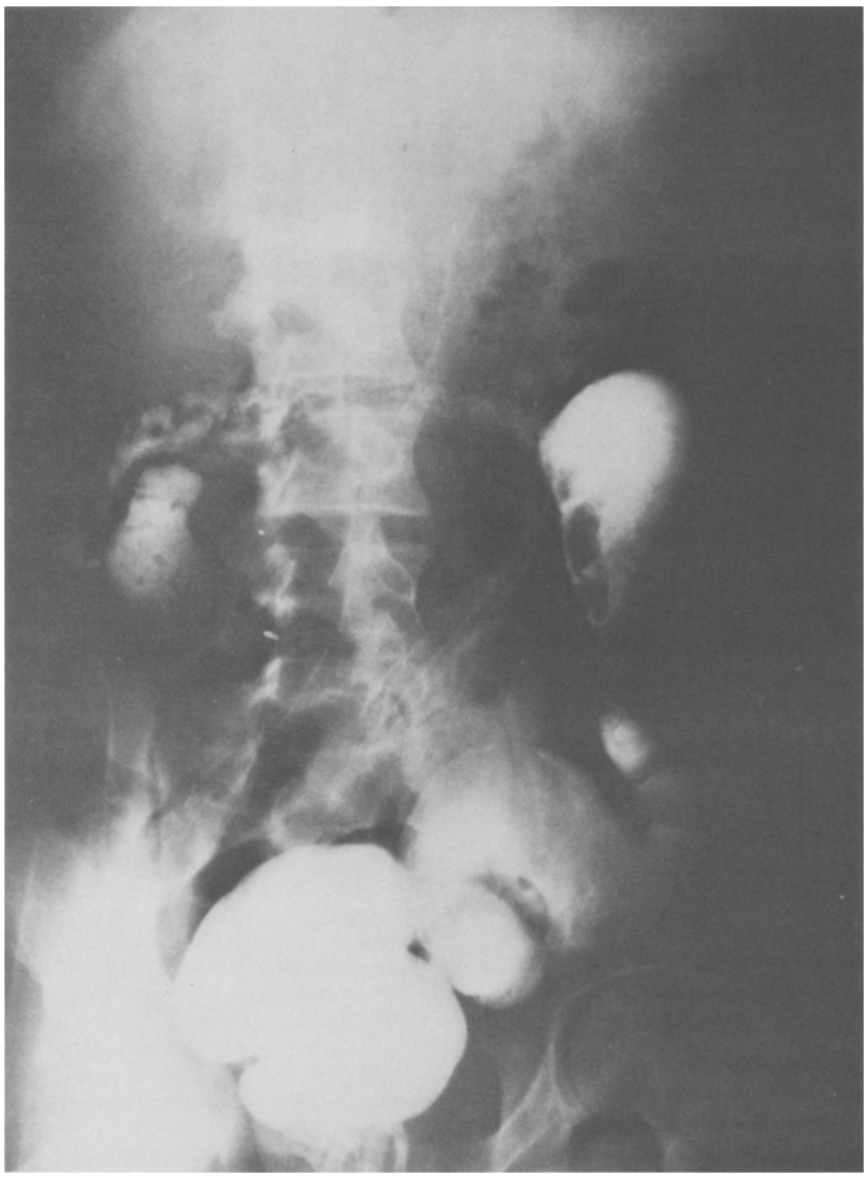

Fig 1. Barium enema study demonstrates continuous zones of constricted bowel with dilated splenic and sigmoid flexures. Cobblestone-like mucosal deformities are widespread. Rectal mucosa appears normal.

mucosal zones; exuberant muscular and neuromal hypertrophy; scarring; and lymphangiectasia (Figure 5). Paneth cell metaplasia, which also can be seen in ulcerative colitis, was observed. No epithelioid giant cells were identified. Mesenteric lymph nodes were hyperplastic.

DISCUSSION

In 1974, an abstract appeared presenting what was felt to be an unusual sequel of ulcerative colitis (1). Unlike pseudopolyps, which consist of extensively inflamed scarred islands of hyperplastic mucosa, the colons in these cases bore projections composed of a submucosal core and covered by intact colonic epithelium with a moderate degree of edema and inflammation. Occasional arborescence and diameter uniformity were striking features. Patients reported in the abstract were middle-aged individuals who had a limited clinical episode of

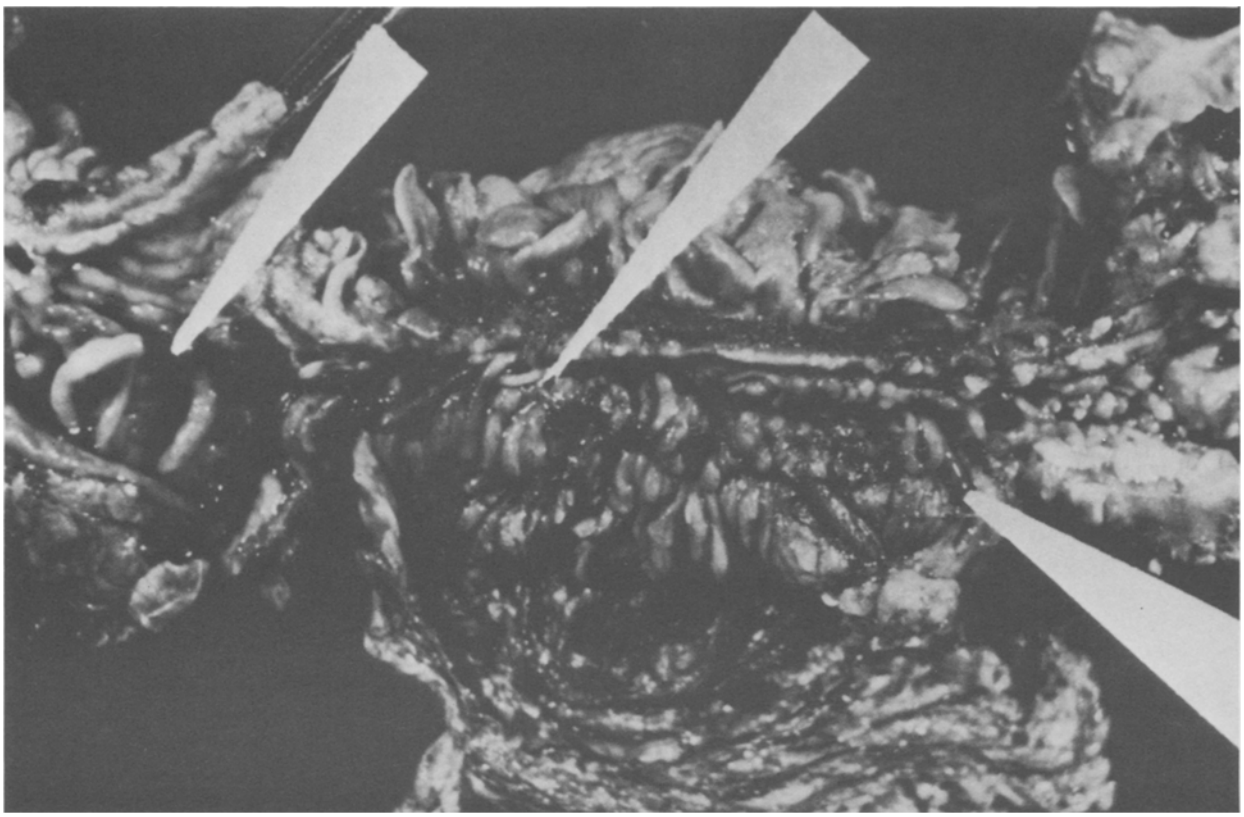

Fig 2. Innumerable wormlike projections emerge through the longitudinally transected bowel wall.

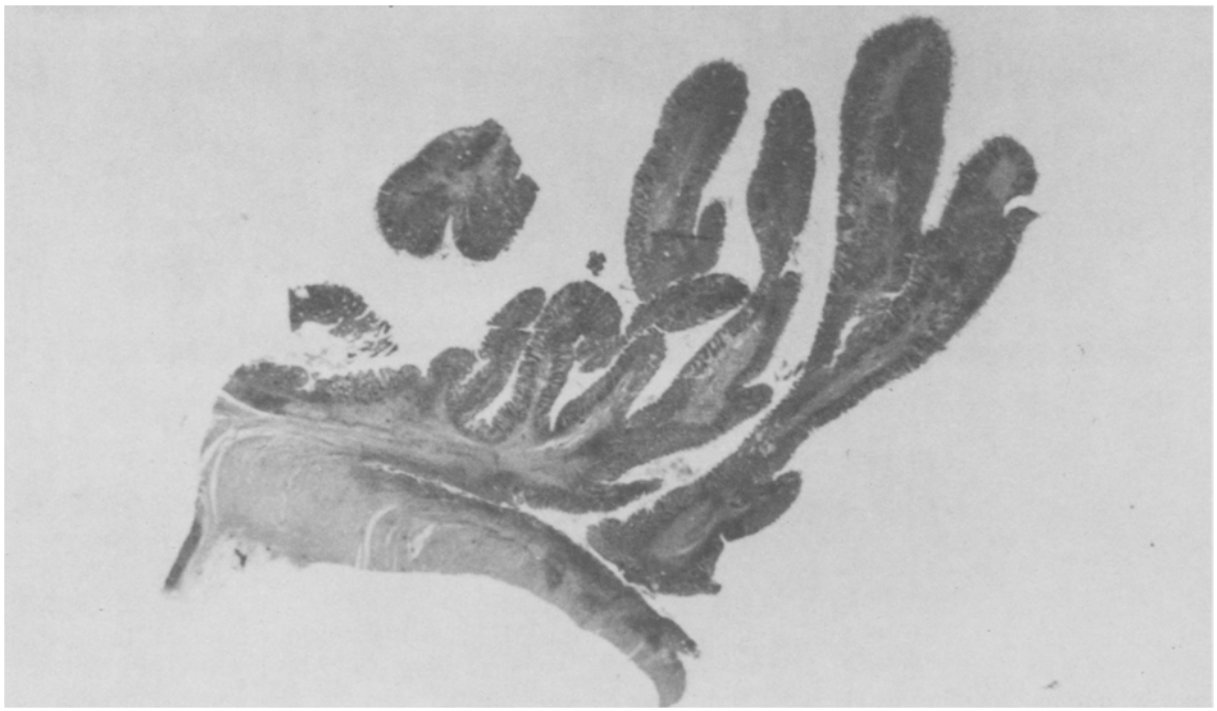

Fig 3. Filiform polyposis in an arborescent arrangement. Note the relatively uniform diameter throughout each polyp's length. (H&E, ×1)

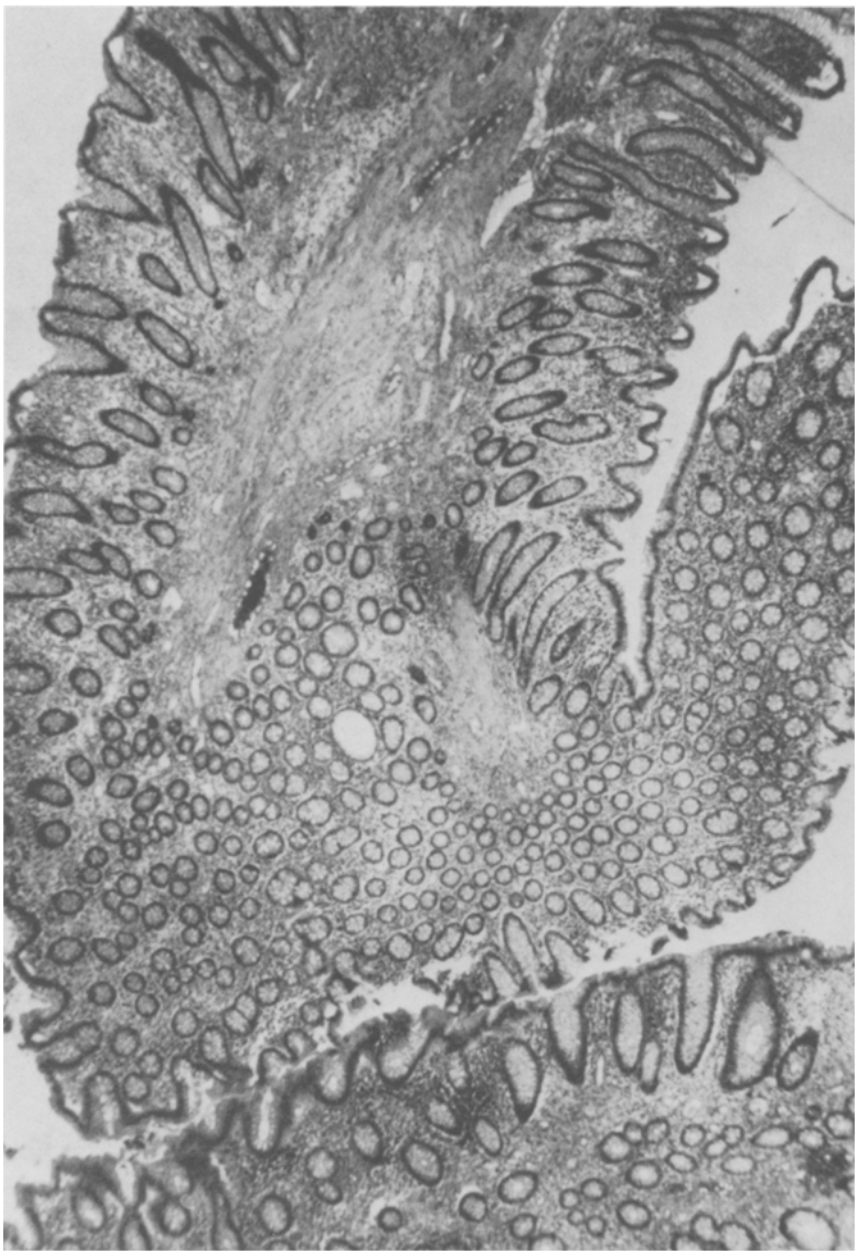

Fig 4. Cross-section of filiform polyp demonstrates intact edematous mucosa with mild chronic inflammation. Polyp stalk consists of hyperplastic muscularis mucosae, prominent vascular channels, mild edema, and minimal inflammation. (H&E, ×2.5)

acute colitis years previous to a long asymptomatic period. This is in sharp contrast to the 16 years of active symptomatology in this instance. Unlike the previously reported constellation of a background of ulcerative colitis, this case has the hallmarks of transmural colitis (Crohn's disease). In a personal communication, Dr. Appelman relates that he has subsequently seen this entity in instances of transmural colitis (2). In both types of colitis, filiform polyposis frequently spares the rectum (1). This is

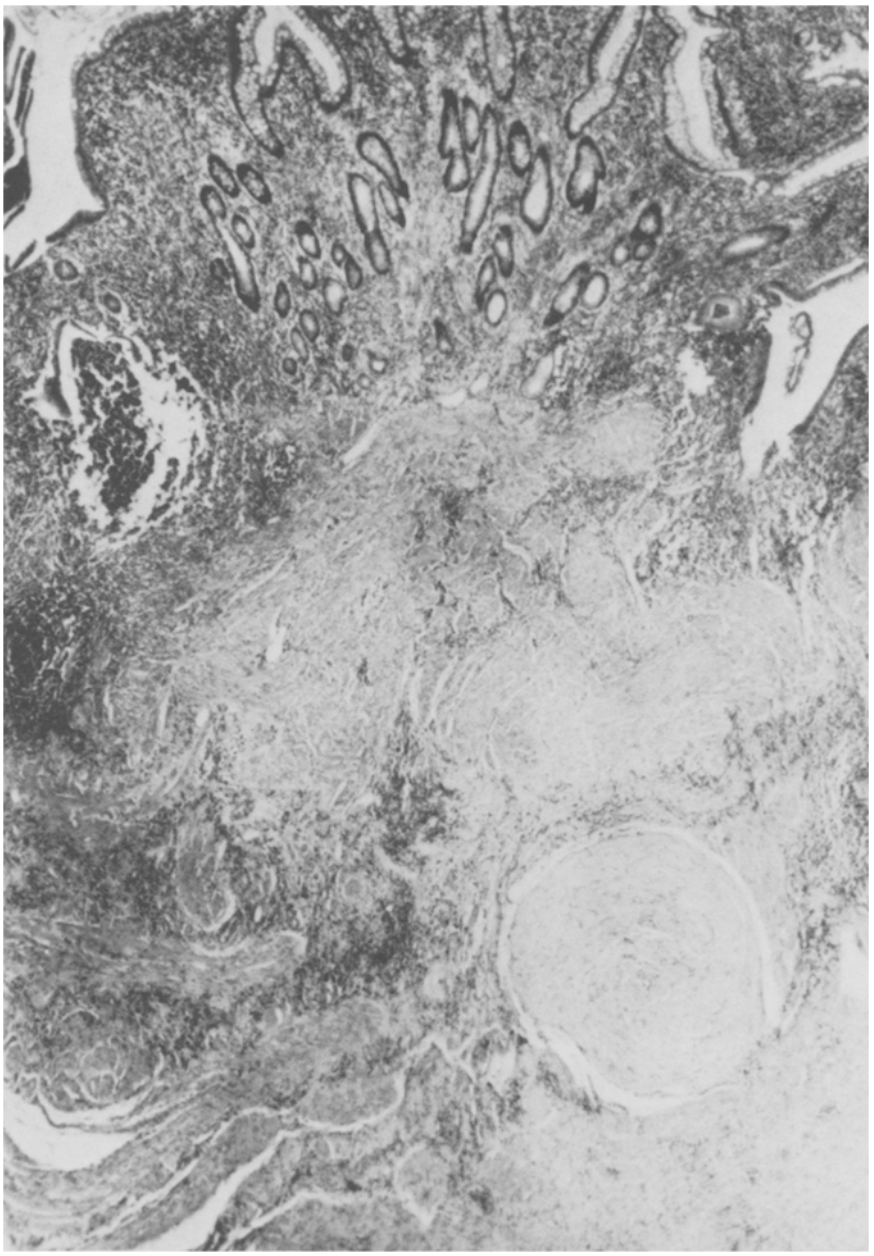

Fig 5. Nonpolypoid colonic zone with typical transmural colitis (Crohn's disease). Two separated, but closely subadjacent, inflamed areas may delineate zone of submucosal proliferation and explain the relative uniformity of diameter throughout length of polyp. (H&E, ×2.5)

perplexing since ulcerative colitis often involves this zone.

Speculation on the mechanism of filiform polyp formation centers on a narrow submucosal region that is stimulated to proliferate by two closely subadjacent, intensely inflamed, occasionally ulcerated zones. The sharp limitation of the zone of submucosal proliferation might explain the uniformity of polyp diameter.

Long-standing ulcerative colitis and transmural colitis (Crohn's disease) of the colon are recognized to have an increased risk of carcinomatous com-

plications (3, 4). Although few cases of filiform polyposis are available for review (1), this malignant coincidence has not been reported. On this basis, filiform polyposis of the colon by itself does not constitute an indication for colectomy.

SUMMARY

Filiform polyposis of the colon is characterized by multitudinous wormlike projections of mucosa and submucosa, and it has only previously been reported to be an unusual sequel to a prior limited episode of ulcerative colitis. The first reported instance complicating a 16-year course of typical transmural colitis (Crohn's disease) suggests that this benign proliferation may be a nonspecific submucosal response to two separated, but closely subadjacent zones of submucosal inflammation in either type of colitis. Although few cases of filiform polyposis are available for review, there has been no instance associated with carcinoma. The entity in itself does not represent an indication for colectomy.

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