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Ileal Microadenomas in Familial Adenomatous Polyposis: Observation Under Magnifying Colonoscopy

Recent advances in endoscopic instrumentation provide the opportunity to observe the gastrointestinal mucosa at high magnification. It has been recently reported that characterization of surface features under magnifying colonoscopy has diagnostic value for colorectal neoplasia (1).

We performed magnifying ileoscopy in six patients with familial adenomatous polyposis (FAP) who were under surveillance after total colectomy with ileorectal anastomosis. After spraying 0.2% indico carmine solution, the ileum was observed with a magnifying colonoscope (Olympus CF-200 Z). In three of the patients, this procedure identified small areas with the surface features which were distinctive from the adjacent ileal mucosa with round and small-sized villous structure (Figure **1**). The areas were slightly elevated with tubular pattern. Histologic examination of the biopsy specimens obtained from these lesions revealed adenomatous tubules with mild epithelial atypia (Figure **2**).

In both experimental animals treated with colon carcinogens (2) and colectomy specimens of patients with FAP (3), stereomicroscopic observation with methylene-blue staining revealed distinct foci of large crypts, termed as aberrant crypt foci (ACF). Because the ACFs contained dysplastic tubules, they are regarded as an extremely early stage of adenoma. The magnified view and histologic findings of the ileal lesions demonstrated herein were similar to ACF found in the resected colon of FAP (3).

Our experience suggests that magnifying colonoscopy, as well as stereomicroscopy (4), can detect early microadenomas in patients with FAP. Although the in-vivo observation under the instrument has some limitation in interpretation of the data, this approach would be another procedure in investigating the histopathogenesis of adenomas in patients with FAP.

Figure 1: Magnified view of the ileal mucosa identifies a slightly elevated lesion with the surface of tubular structure. The lesion is distinctive from the surrounding ileal villi.

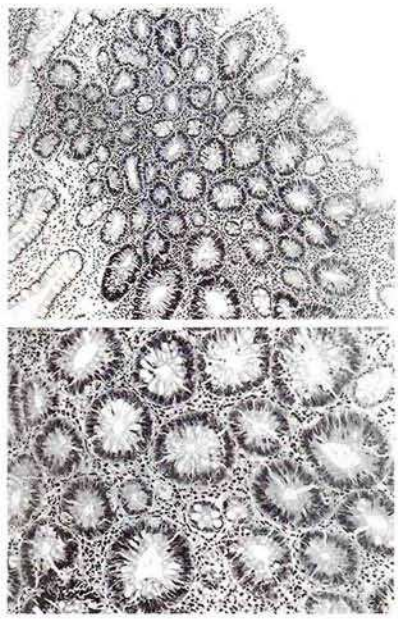

Figure 2: Histologic examination of the biopsy specimen shows crowded adenomatous tubules (top) of mild dysplasia (bottom).

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