Endoscopic retrograde cannulation of the esophagus (ERCE)

To the Editor:

We wish to report an unusual use of the gastroscope which we have entitled endoscopic retrograde cannulation of the esophagus (ERCE).

A 61-year-old man was referred for evaluation of an esophageal stricture. Fourteen months earlier he had been found to have a localized laryngeal carcinoma. After laryngectomy and bilateral neck dissection, 6000 rads were administered following which a severe stricture of the cervical esophagus developed. Perforation occurred during an attempt at dilatation with the subsequent development of mediastinitis. Antibiotic therapy and a feeding gastrostomy successfully resolved the infection. The patient noted inability to swallow his saliva at this time.

The patient then presented himself to our hospital. Barium swallow and direct laryngoscopy demonstrated complete obstruction of the esophagus 1 cm below the hypopharynx. In an attempt to define the distal end of the stricture, we inserted a pediatric gastroscope (Olympus GIF-P2) through the gastrostomy. We identified the gastroesophageal junction and advanced the instrument to the point of obstruction. The exact level of the obstruction was defined radiographically using Gastrografin injected through the biopsy channel (Fig. 1).

The total length of the stricture was found to be less than 2 cm after a review of both the barium swallow and endoscopic study. Surgical correction of the obstructed segment is being planned.

We believe that this unusual use of the endoscope afforded us a clear definition of the extent of the stricture.

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Osseous metaplasia in a benign colon polyp

To the Editor:

Your readers may be interested in this (perhaps the first) case of ectopic ossification in a benign intestinal polyp found in a 25-year-old male medical student who was referred for rectal bleeding. Proctoscopy revealed a 1.0-cm polyp at 10 cm from the anus along the posterior wall of the
Figure 1. A section of the polyp removed at colonoscopy reveals dilated glands centrally, lined by normal colonic mucosal cells. Areas of ectopic bone formation are present (arrows) (X10).

Figure 2. A higher magnification view of the area of ectopic ossification revealing a rim of osteoblasts (curved arrows) and adjacent new bone formation with an osteoid seam (white arrows) (X200).

rectum. Air contrast barium enema confirmed the presence of this polyp and a smaller one in the descending colon. Colonoscopy was performed to the cecum, but only the rectal polyp was seen and it was removed by electrocautery.

Microscopically, the specimen consisted of a 1-cm polypoid mass composed of masses of capillaries that were radially oriented toward the surface of the tumor and were surrounded by a marked inflammatory infiltrate consisting primarily of neutrophils with some lymphocytes, plasma cells, and occasional eosinophils and histiocytes. In the central basilar portion of the specimen were multiple cystic dilated glands that were filled with mucin and lined by normal appearing colonic epithelium. Adjacent to these glandular spaces were multiple foci of osseous metaplasia. These consisted of irregular islands of mineralized osteoid rimmed by a prominent layer of osteoblasts (Figs. 1 and 2).

The formation of bone outside the skeletal system occurs in a variety of pathological conditions and may be clinically significant, as in generalized myositis ossificans, or may represent incidental findings, as in our case, and in many tumors of different origins. In either setting, the ossification process is initiated by a local osteogenic factor which stimulates osteoblasts to differentiate and to synthesize collagen and ground substance. The subsequent formation of hydroxyapatite crystals depends upon the presence of adequate concentrations of calcium, phosphate, and hydroxyl groups. Although this is the last step in bone formation, bone remodeling is a continual process, occurring even in areas of ectopic ossification and mediated by the counterbalancing actions of osteoclasts and osteoblasts. In the inflammatory polyp removed from our patient, ossification occurred in an area of the lesion where collagen fibers and inflammatory cells were located. In this situation, active osteoblasts probably differentiate from surrounding fibroblasts or precursor cells and go on to incorporate pre-existing connective tissue into newly formed matrix rather than synthesize new collagen.

Bone formation has been described in many benign and malignant tumors of the digestive organs, breasts, prostate, uterus, and skin appendages. Adenocarcinoma of the rectum appears to be the tumor most frequently noted to contain bone, with a prevalence of 0.4%. Since the inflammatory polyp removed from our patient was also located in the rectum, speculation regarding local osteogenic stimuli could focus on repeated local trauma or on a peculiar characteristic of the rectal mucosa itself. Once the nature of the primary osteogenic stimulus is better understood, the entire process of ectopic ossification can be more thoroughly investigated.

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REFERENCES
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Gastric sarcoidosis

To the Editor:

We would like to bring to the attention of your readers a case of gastric sarcoidosis diagnosed endoscopically in a West Indian black woman who first presented in 1962 when aged 24, with a left apical pulmonary lesion compatible with tuberculosis. Despite lack of bacteriological confirmation, she had a course of antituberculous chemotherapy because of a strong family history of tuberculosis. In 1972 diffuse pulmonary shadowing compatible with sarcoidosis was noted. Histological examination of a cervical lymph node revealed noncaseating granulomata. Antituberculous chemotherapy was resumed and was supplemented with corticosteroids when she complained of effort dyspnea 5 months later. Despite symptomatic improvement, pulmo-