



**Figure 17-16** Gastric polyps. **A**, Hyperplastic polyp containing corkscrew-shaped foveolar glands. **B**, Hyperplastic polyp with ulceration (*arrow*). **C**, Fundic gland polyp composed of cystically dilated glands lined by parietal, chief, and foveolar cells. **D**, Gastric adenoma recognized by the presence of epithelial dysplasia.

## Inflammatory and Hyperplastic Polyps

**Up to 75% of all gastric polyps are inflammatory or hyperplastic polyps.** Since chronic inflammation drives the development of such polyps, the incidence depends partly on the regional prevalence of *H. pylori* infection. These polyps are most common in individuals between 50 and 60 years of age, and usually develop in association with chronic gastritis, which initiates the injury that leads to reactive hyperplasia and polyp growth. Among individuals with *H. pylori* gastritis, polyps may regress after bacterial eradication. Because the risk of dysplasia correlates with size, polyps larger than 1.5 cm should be resected and examined histologically.

### MORPHOLOGY

The majority of inflammatory or hyperplastic polyps are smaller than 1 cm in diameter and are frequently multiple, particularly in individuals with atrophic gastritis. These polyps are ovoid in shape and have a smooth surface, though superficial erosions are common. Microscopically, polyps have irregular, cystically dilated, and elongated foveolar glands (Fig. 17-16A). The lamina propria is typically edematous with variable degrees of acute and chronic inflammation, and surface ulceration may be present (Fig. 17-16B).

## Fundic Gland Polyps

Fundic gland polyps occur sporadically and in individuals with familial adenomatous polyposis (FAP). The prevalence of fundic gland polyps has increased markedly in recent years as a result of increasing use of proton pump inhibitor therapy. These drugs inhibit acid production, which leads to increased gastrin secretion and, in turn, oxyntic gland growth. Fundic gland polyps may be asymptomatic or associated with nausea, vomiting, or epigastric pain.

### MORPHOLOGY

Fundic gland polyps occur in the gastric body and fundus and are well-circumscribed lesions with a smooth surface. They may be single or multiple and are composed of cystically dilated, irregular glands lined by flattened parietal and chief cells. Inflammation is typically absent or minimal (Fig. 17-16C). Dysplasia and even cancer may occur in FAP-associated fundic gland polyps, but sporadic fundic gland polyps carry no cancer risk.

## Gastric Adenoma

Gastric adenomas represent up to 10% of all gastric polyps (Table 17-5). Their frequency increases progressively with age, and there is a marked variation in prevalence among different populations that parallels the incidence of gastric adenocarcinoma. Patients are usually between 50 and 60 years of age, and males are affected three times more often than females. Like fundic gland polyps, the incidence of adenomas is increased in individuals with FAP. *Similar to other forms of gastric dysplasia, adenomas almost always occur on a background of chronic gastritis with atrophy and intestinal metaplasia.* The risk of adenocarcinoma in gastric adenomas is related to the size of the lesion and is particularly increased in lesions greater than 2 cm in diameter. Overall, carcinoma may be present in up to 30% of gastric adenomas.

### MORPHOLOGY

Gastric adenomas are usually solitary lesions less than 2 cm in diameter, most commonly located in the antrum. The majority of adenomas are composed of intestinal-type columnar epithelium that exhibits varying degrees of dysplasia (Fig. 17-16D). Dysplasia can be classified as low or high grade, and both grades may include enlargement, elongation, pseudostratification, and hyperchromasia of epithelial cell nuclei, and epithelial