Current Diagnostic Pathology (2007) 13, 467–478

Current
DIAGNOSTIC
PATHOLOGY

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MINI-SYMPOSIUM: PATHOLOGY OF COLORECTAL POLYPS

Non-neoplastic colorectal polyps

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KEYWORDS
Mucosal prolapse polyps;
Hamartomatous polyps;
Colon polyps;
Benign polyps

Summary With the explosion in the number of screening colonoscopic procedures, pathologists have learned to recognize a host of non-neoplastic polyps that can be loosely categorized as those stemming from mucosal prolapse, hamartomatous lesions, incidental benign stromal polyps and polyps associated with systemic diseases. We briefly review solitary rectal ulcer syndrome, inflammatory cloacogenic polyps, diverticular disease-associated prolapse polyps, cap polyps, juvenile polyps, Peutz–Jeghers polyps, Cronkhite–Canada polyposis, elastosis, benign fibroblastic polyps, inflammatory fibroid polyps, pneumatosis, vascular lesions, filiform polyps, lymphoid polyps, malakoplakia, amyloidosis and endometriosis.

Mucosal prolapse polyps

Mucosal prolapse can give rise to endoscopically recognized colonic polyps. Prolapse is common in the rectum, and physiological prolapse may also occur in the region of the ileocaecal valve. These conditions are all reactive, and are important to recognize, as the associated epithelial changes are occasionally misdiagnosed as neoplasms. Any of these polyps can feature a serrated appearance, but the overall architecture differs from that of hyperplastic polyps and sessile serrated adenomas.

Solitary rectal ulcer syndrome

Solitary rectal ulcer syndrome (SRUS) describes a pattern of mucosal change (both with and without ulceration) located in the rectum. Symptoms include haematochezia, pain and tenesmus. It occurs in patients who strain when defaecating. Difficulty coordinating the smooth muscle during the defaecatation process such that the puborectalis sling does not relax at the proper time causes traction on the rectal mucosa and the secondary changes of SRUS. Endoscopic ulcers appear in 20–70% of patients, predominantly on the anterior or anterolateral rectal wall. In some cases, a mass-like lesion can also be associated with the ulceration, which raises the clinical suspicion of cancer.

The histology of SRUS (Figures 1 and 2) in rectal biopsy includes hypertrophy of the muscularis mucosae with fibres entering into the mucosa. Fibrosis is associated with the proliferated smooth muscle, and the rectal glands become entrapped and distorted. The mucosal surface then becomes ulcerated, with herniation of glands deep into the

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doi:10.1016/j.cdip.2007.06.009

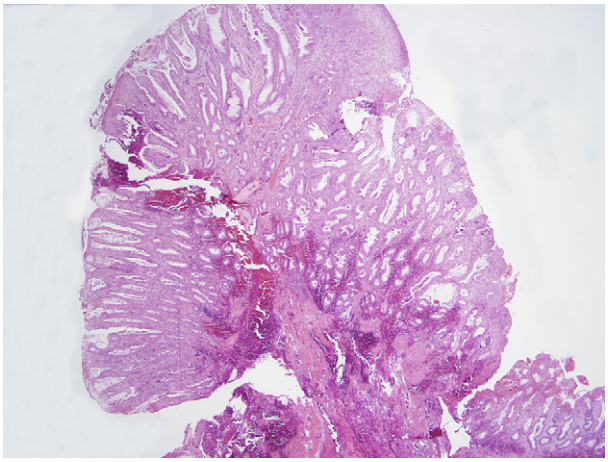

Figure 1 Solitary rectal ulcer syndrome. At low magnification, note the surface erosion.

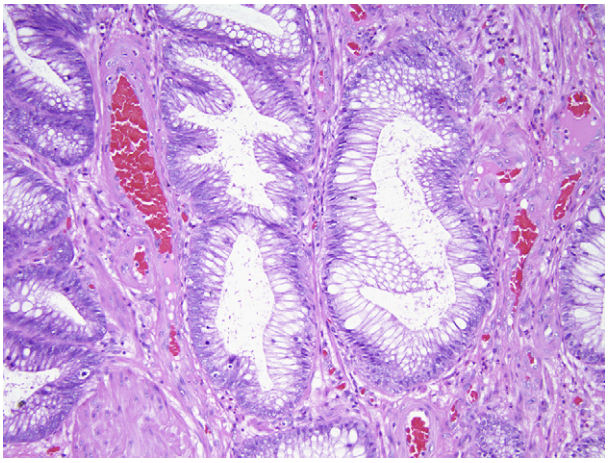

Figure 2 Solitary rectal ulcer syndrome. In mucosal prolapse disease, individual glands are invested by delicate strands of muscle. Contrast this with the features seen in Figure 8.

submucosa, accompanied by wisps of lamina propria.[1–6] Therefore, two phases may be encountered: a polypoid phase and an ulcerated phase. The rectal crypts can become 'diamond-shaped'.[7,8] Some caution is advised, however, as mucosal prolapse changes next to malignant neoplasms may appear identical to SRUS, so extensive sampling of a large solitary rectal ulcer is prudent (Figure 3).[9]

'Colitis cystica profunda' is part of the spectrum of disease with mucosa (glands and stroma) that has prolapsed down through the muscularis mucosae into the submucosa, forming a polypoid mass. These misplaced glands can mimic carcinoma, but attention to their cytological features should avert misdiagnosis—the misplaced glands

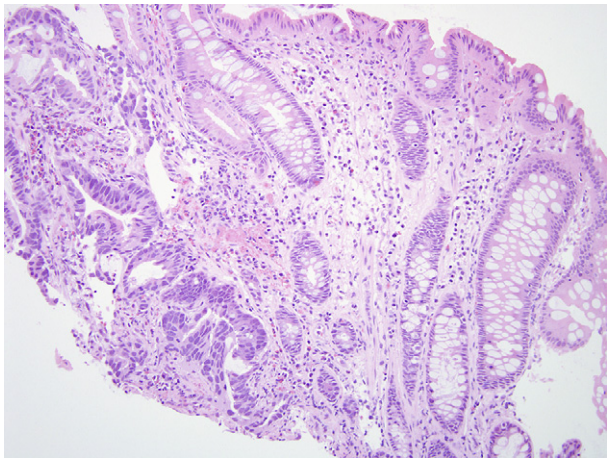

Figure 3 Prolapse changes associated with a neoplasm. In the right side of the field, there are delicate strands of muscle between benign glands. The carcinoma on the left has resulted in mucosal prolapse.

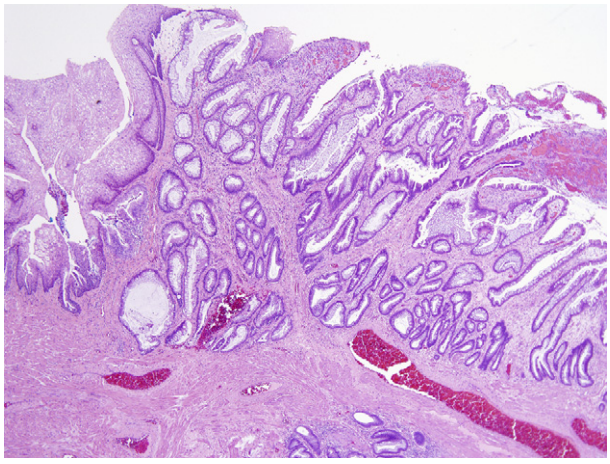

Figure 4 Inflammatory cloacogenic polyp. Prolapse changes at the anorectal junction are similar to those elsewhere. There are diamond-shaped crypts in the centre of the field.

display the same features as overlying non-neoplastic ones.

Inflammatory cloacogenic polyps

An inflammatory cloagogenic polyp is formed by mucosal prolapse at the anorectal transition; both squamous and columnar mucosa are seen on biopsy (Figure 4).[5,10] The polyps are typically found on the anterior wall of the anal canal (similar to SRUS), and patients may present with bleeding. There is often a tubulovillous growth pattern with surface ulceration, displacement of crypts downward into the submucosa, and fibromuscular stroma that extends upward into the mucosa.