Squamous metaplasia of the rectum and sigmoid colon

Luis Bujanda, MD, PhD, Carmen Iriondo, MD, Carmen Muñoz, MD, PhD, Carmen Etxezarraga, MD, M. Mar Ramírez, MD, Félix Ramos, MD, PhD, Araceli Sánchez, MD

The mucocutaneous junction is located between 1 and 2 cm from the anal margin and defines the division between the columnar and squamous epithelia. The squamous cell layer may be located immediately above the dentate or pectinate line of the anal canal, but squamous mucosa more than 1 cm above the dentate line is considered abnormal. In the presence of anal dermatitis or anal fistulas or fissures it is sometimes possible to observe squamous epithelium up to 1 cm from the dentate line. Squamous metaplasia or leukoplakia of the rectum and sigmoid is rare, and its diagnosis requires the exclusion of primary squamous cell carcinomas, adjacent fistulas, and continuity with the squamous epithelium of the anus. This is a case of squamous cell metaplasia in the rectum and sigmoid.

CASE REPORT

A 52-year-old man in whom irritable bowel syndrome was diagnosed 8 years earlier presented with a 1-year history of intense hypogastric discomfort and diarrhea that often coincided with stressful situations. Physical examination was normal. The basic laboratory tests, complete blood count, and sedimentation rate were normal. Stool culture and stool for ova parasites were negative. Colonoscopy revealed a tiny polyp in the ascending colon that was removed with the biopsy forceps. The histologic diagnosis was tubular adenoma. At the rectosigmoid junction (15 cm from the anal margin) islets of whitish mucosa measuring 1 to 3 cm in diameter were observed, whereas the rectal mucosa itself had a slightly erythematous appearance that suggested nonspecific proctitis. Histologic evaluation of biopsies of the rectosigmoid junction revealed the presence of squamous epithelium. Evaluation of the rectal biopsies revealed a colonic-type glandular epithelium associated with nonkeratinized squamous epithelium with superficial glycogenization. One of the fragments was from the junction of the 2 types of epithelium (Fig. 1).

Twenty months later colonoscopy showed a whitish mucosa with clearly defined margins similar to that seen at the previous examination, extending between 10 and 17 cm from the anal margin and surrounded by normal colonic mucosa (Fig. 2). Occasional islets of whitish mucosa were observed from up to 10 cm proximal to the anal margin. Histopathologic evaluation of biopsy specimens revealed nonkeratinized squamous epithelium without other alterations, compatible with anal-type mucosa. The patient continues to undergo periodic symptomatic treatment of the associated discomfort.

DISCUSSION

Squamous cell metaplasia has been described with relative frequency in colorectal adenocarcinoma (where it is called adenosquamous carcinoma) and in colorectal polyps (known as adenoacanthoma). However, squamous metaplasia unassociated with tumor or polyp is rare. Davis, in 1938, reported the first cases of squamous metaplasia of the rectum. Of the 5 cases described, only 2 meet the above criteria. Since then, few similar cases have been reported.
although a number of hypotheses have been proposed, including the existence of direct stem cell stimulation, the presence of ectopic squamous cell nests, endothelial growth on the part of regional blood vessels, and squamous metaplasia developing from the adenomatous glands.² Anal dermatitis and rectal prolapse are among the disorders associated with squamous metaplasia.²,⁴ In the present case, the only diagnosis of irritable colon syndrome occurred 8 years earlier.

The clinical picture is nonspecific. Pain with bowel movements has been described, along with anal pruritus, constipation, rectal pressure sensation, and blood loss through the rectum.² The diagnosis is histologic. However, an endoscopic appearance of a well-delimited whitish mucosa that is in sharp contrast with the rest of the rectal or colonic mucosa is highly suggestive of the diagnosis.

Surgical management eliminates the lesions, although recurrence is frequent. Radiotherapy is also not definitive.⁴ The efficacy of other treatment modalities such as argon plasma coagulation has not been established.

The natural history of squamous metaplasia of the rectum and sigmoid colon is uncertain, although available data suggest it represents a premalignant state, analogous to other premalignant metaplastic lesions of the esophagus and cervix. Zirkin et al.⁶ described a case of ulcerative colitis with squamous metaplasia that transformed into dysplasia, in situ carcinoma, and finally invasive carcinoma. Other investigators have described rectal tumors associated with squamous epithelium.⁷,⁸ In our case the metaplastic tissue was seen to spread but without evidence of preneoplastic changes.

REFERENCES