Primary Adenocarcinoma in Peristomal Skin: A Case Study
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Abstract
Primary adenocarcinoma at an ileostomy site is an exceedingly rare occurrence but has been documented at the peristomal skin of patients with a long-standing ileostomy. Chronic irritation and resultant metaplasia is thought to be a key underlying mechanism for this phenomenon. Biopsy of newly developing lesions in the peristomal area of long-standing stomas is essential in order to avoid delayed diagnosis and limit complications. A 37-year-old man with a history of ulcerative colitis and ileostomy surgery 18 years prior presented with an asymptomatic polypoid lesion at the mucocutaneous junction. Initially diagnosed as pyogenic granuloma, the lesion was treated using topical silver nitrate. This did not resolve the lesion but ulceration and bleeding were observed. A biopsy showed evidence of primary adenocarcinoma arising from the ileostomy site. The lesion was removed surgically, an ileo-anal J pouch was created, and the patient is currently receiving long-term follow-up and monitoring for any possible future complications. This case study is one of several in the literature suggesting that a high index of suspicion is warranted when ileostomy patients, especially those with a history of ulcerative colitis, present with unusual peristomal lesions.

Key Words: adenocarcinoma, ileostomy, peristomal skin, case study

Case Report
Mr. H is a 37-year-old man with a history of ulcerative colitis (UC). He presented to the dermatology department with an asymptomatic polypoid lesion at the mucocutaneous junction 18 years following an ileostomy. His subtotal colectomy with an excluded rectal segment was performed when he was 17 years old. The peristomal lesion initially was diagnosed as a pyogenic granuloma and treated with topical silver nitrate with no response. Approximately 10 weeks later, the lesion began to ulcerate and bleed and developed some areas of overgranulation (see Figure 1, arrow), at which point a biopsy was performed that showed a well-differentiated invasive adenocarcinoma of intestinal type with focal areas of colonic metaplasia, indicating a dysplastic change from ileal mucosa. A subsequent biopsy from the rectal stump showed no evidence of dysplasia or adenocarcinoma to suggest a possible metastasis. Mr. H experienced no abdominal pain, increased stomal effluent, or intestinal bleeding. Physical examination was unremarkable and computed tomography imaging of the chest, abdomen, and pelvis showed no evidence of a visceral malignancy.

Surgical excision was performed. An ileo-anal J pouch was fashioned with good outcome and the patient is currently receiving long-term follow-up and monitoring for any possible future recurrences.

Discussion
Ileostomy as a treatment for UC was first suggested by Brown2 in 1913; however, this method of treatment did not gain popularity in Britain until the 1940s3 and is increasingly used for other conditions such as familial adenomatous polyposis (FAP) and Crohn’s disease (CD). Mechanical complications include stomal retraction, prolapse, stenosis, abscess, and fistula formation.4

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Adenocarcinoma at an ileostomy site is a very rare late complication, with an estimated incidence of two to four per 1,000 ileostomies; however, long-term follow-up studies are required to validate these data, reported predominantly in patients with UC. Sigler and Jedd reported the first case in 1969 in a woman with UC that presented 18 years after ileostomy. The relatively higher incidence among UC patients may be related to the fact that more UC patients have an ileostomy than patients with other conditions, such as Crohn’s disease.

Adenocarcinoma arising at an ileostomy site may present clinically as finger-like projections or polypoid lesions, pyogenic granuloma-like lesions, excess granulation tissue, or ulcerations. The limited number of reported cases may hamper identification of common characteristics; however, the presence of overgranulation in a localized area of the peristomal skin is the most frequently noted sign in the reported cases and was also observed in Mr. H’s case.

Neoplasms typically occur long after ileostomy surgery (on average, more than 25 years), but one was reported as early as 9 years after surgery in a patient with FAP. The exact etiology of the neoplasm remains unclear but the long latent period between ileostomy construction and the appearance of neoplasm suggests that long-standing regenerative epithelial hyperproliferation caused by chronic irritation at the mucocutaneous junction is relevant. The chronic irritation may occur as a result of the constant exposure of the ileal mucosa to physical and chemical agents such as adhesives and irritants, some of which might be carcinogenic. Another hypothesis is that skin, which is constantly exposed to fecal material, may develop metaplasia comparable to the development of Barrett’s esophagus with chronic gastro-esophageal reflux.

The pathogenesis of metaplasia and its possible risk regarding the development of neoplasm have been further supported by the presence of dysplasia in histological specimens from the area adjacent to a primary ileostomal adenocarcinoma; thus, it is conceivable that this mechanism is instrumental in the development of these neoplastic lesions.

Primarily, adenocarcinoma of the ileostomy is treated by surgical excision and careful long-term monitoring for any recurrence or complication because metastasis from such neoplasms have been reported. The authors assert that healthcare professionals involved in the care of patients with a stoma should be aware of such risk and have a high index of suspicion, particularly among patients with a long-standing ileostomy of more than 8 years, and consider regular monitoring in case of malignant change.

Further research in this area is needed both to establish the exact etiology of this phenomenon and to help identify individuals at possible risk. This will require the collaboration of various facilities and clinicians involved in the care of patients with a stoma.

Conclusion

As illustrated in the case of a 37-year-old man with an 18-year-old ileostomy who developed adenocarcinoma of the peristomal skin, clinicians need to be vigilant regarding the development of stoma-related lesions. Misdiagnosis can be destructive but appropriate management involving surgery and long-term follow-up can provide positive outcomes in this rare but treatable condition.
Acknowledgement

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References


Barrier gauze dressing successfully combats influenza virus

Derma Sciences, Inc (Princeton, NJ) recently released an independent laboratory report indicating that the company’s Bioguard barrier gauze dressings exhibit high antiviral efficacy against virulent bacteria such as methicillin-resistant Staphylococcus aureus (MRSA). BCS Laboratories Inc (Gainesville, FL) exposed two varieties of the dressings to several quantities of the Influenza A (H1N1; ATCC VR-1469) virus over a 24-hour period. At the conclusion of the interval, quantities of the virus were reduced in both dressing types by an average of 99.93%.

These findings are important because of the potential for cross- and airborne contamination during wound dressing changes.

For more information, visit www.dermasciences.com.

Company seeks approval of soft tissue regeneration product

Organogenesis Inc (Canton, Mass) has filed a Premarket Approval Application with the US Food and Drug Administration (FDA) for CelT ex™, a living cellular construct for oral soft tissue regeneration. The construct is comprised of human fibroblasts, keratinocytes, and extracellular matrix proteins. Studies suggest the living cells found in the construct produce a wide array of growth factors and cytokines that, in turn, stimulate the patient’s own cells to regenerate new gum tissue. If approved, the construct will be the first, living cell-based technology that is FDA-approved for use in the dental market. The company is the world’s first regenerative medicine company to successfully commercialize and mass-produce profitable living cell-based products. Initial clinical trials focused on use of the construct for patients with gingival recession.

For more information, visit www.organogenesiss.com.

Adhesive technology improves wound care products

Avery Dennison Specialty Tape’s (Shanghai, Asia) newest generation of ultrathin hydrocolloid adhesives improves comfort, flexibility, and wear time; lessens skin softening beneath the dressing; reduces the risk of skin irritation; and facilitates gentle removal. Much thinner than conventional hydrocolloids, the new products surpass the fluid-handling performance of thicker hydrocolloid formulations. They are available with a choice of highly breathable and conformable film carriers. A special moisturizing hydrocolloid formulation is offered for dry and cracked skin and treatment of calluses and corns, particularly on feet.

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