

Squamous-Cell Carcinoma of the Anus in Condyloma Acuminatum

Successful Treatment with Preoperative Chemotherapy and Radiation

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A 40-year-old black male had unresectable giant condylomata acuminata of the anorectum with invasive, squamous-cell carcinoma. He was treated with intravenous 5-fluorouracil and mitomycin-C and with extended field radiation to the primary lesion. An abdominoperineal resection was performed, and the surgical specimen contained no residual cancer. Three years after diagnosis, the patient has no recurrent cancer. This case illustrates that otherwise unresectable giant condylomata acuminata with invasive carcinoma may be rendered operable with chemotherapy and radiation. [Key words: Condylomata acuminata; Squamous-cell carcinoma; Anus; Surgical adjuvant therapy]

CONDYLOMA ACUMINATUM, a common lesion of the anorectum, occasionally becomes malignant.¹ The traditional therapy of malignant transformation of condylomata is surgical,² although radiation^{3,4} and topical and systemic chemotherapy^{2,5} have been used. If treatment fails, local tumor extension causes fistula formation, hemorrhage, infection, and death.² Successful treatment with systemic chemotherapy, radiation, and abdominoperineal resection of a patient who had squamous-cell carcinoma which developed in anal condylomata is reported.

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Report of a Case

A 40-year-old black male presented to Erlanger Medical Center in 1983 with fatigue, weight loss, rectal pain and hematochezia, and blood loss anemia. He had had perineal condylomata acuminata removed surgically in 1963, but they had subsequently recurred and increased in size. He was homosexual and had frequent anal intercourse. Physical examination revealed a massive (20 × 8 × 8 cm) verrucous circumferential lesion of the anus that extended from the base of the scrotum to a point 3 cm posterior to the anus. The skin of both medial thighs was thickened with peau d'orange appearance. The tumor was fixed to the pubic periosteum, and enlarged presacral and bilateral inguinal lymph nodes believed to contain tumor were palpable. Routine admission laboratory results were normal except for a hemoglobin concentration of 5.1 mg/dl due to blood loss from the tumor. A biopsy specimen of the perineal lesion showed marked acanthosis, hyperkeratosis, and papillomatosis with well-differentiated *in situ* and invasive squamous-cell carcinoma (Fig. 1). The patient underwent a diverting colostomy with Hartmann pouch construction and packed red blood cell transfusion. Clinically enlarged lymph nodes were not excised for pathologic staging because they were included in the large radiation ports necessary to encompass the exophytic mass, both medial thighs and inguinal areas, and presacral and low pelvic lymph nodes. He was treated with 45 Gy in 28 fractions of 1.6 Gy/fraction over 44 calendar days. Concomitantly, chemotherapy was initiated: 5-fluorouracil (5-FU), 1000 mg/m²/day for four days by continuous intravenous infusion with repetition 6 and 12 weeks later; mitomycin-C (15 mg/m²) intravenously, with retreatment in 12 weeks with a 50 percent dose reduction because of previous myelosuppression.⁶ After radiation and chemotherapy, he had decreased rectal pain and drainage and there was an 85 percent reduction in tumor size with improved anal mobility (Fig. 2). Bone scan, computed tomography of the abdomen and pelvis, and lymphangiogram

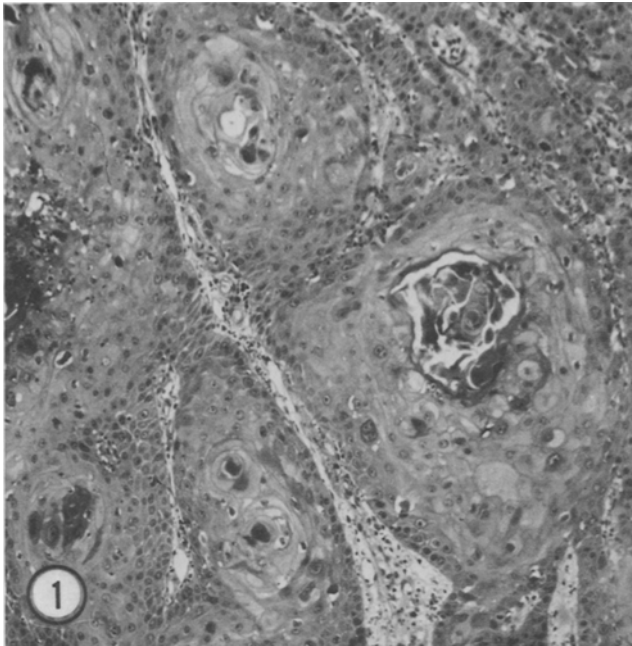


FIG. 1. Biopsy specimen of the perineal mass showing well-differentiated infiltrating squamous-cell carcinoma (hematoxylin and eosin; $\times 640$).

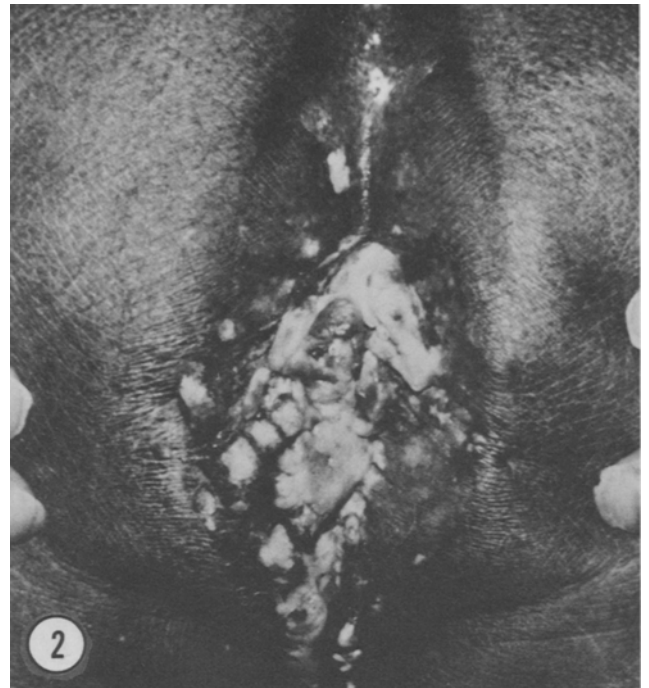


FIG. 2. The perineum after radiation and chemotherapy.

showed no evidence of metastasis. Thirty-two weeks after presentation, a biopsy specimen of the residual mass did not contain carcinoma. A week later, an abdominoperineal resection was performed. No squamous-cell carcinoma was detectable by microscopic analysis of the surgical specimen (Fig. 3). He has had no evidence of recurrent carcinoma after three years, although a few small perineal papillary lesions resembling benign condylomata arose one year after surgery.

Discussion

Surgery is the most widely studied modality for the treatment of verrucous and squamous-cell carcinomas which arise in condyloma acuminatum.^{1,5,7,8} Even after aggressive surgical management of apparently resectable lesions, recurrence of locally invasive or distant cancer occurs with a high likelihood of significant morbidity and mortality.^{2,9} Relatively little is known about the effects of primary radiation therapy^{4,9} and chemotherapy⁵ in these lesions because the results of treatment in only two cases and one case managed with each modality, respectively, have been reported. Radiation therapy for verrucous carcinoma of the oral cavity has not been successful¹⁰ and may transform these low-grade malignancies into anaplastic carcinoma.¹⁰⁻¹² An unresectable Buschke-Loewenstein tumor was treated with preoperative chemotherapy (intravenous methotrexate and bleomycin) and radiotherapy.⁵ The tumor was rendered operable and an abdominoperineal resection was performed, but the patient died of recurrent cancer six months later. In the present case, however, there was a striking reduction in tumor size after preoperative radiation and 5-FU/mi-

tomycin-C administration, no cancer in the abdominoperineal resection specimen, and apparent remission of cancer three years after therapy. Squamous-cell carcinomas unrelated to condylomata which arise distal to the



FIG. 3. The perineum approximately four weeks after surgery.

dentate line also show a salutatory response to preoperative therapy with radiation and 5-FU with or without mitomycin-C.^{6,13} Of 104 patients treated in this manner, 82 were alive and apparently free of disease 2 to 11 years after treatment.¹⁴ Furthermore, 83 of these 104 patients had no microscopic evidence of tumor in biopsy or abdominoperineal resection specimens after preoperative therapy.¹⁴ Because combined chemotherapy and radiation treatment have not been adequate to control primary tumors larger than 5 cm,⁶ and because of the possibility of biopsy sampling error, an abdominoperineal resection was performed in this patient, even though his preoperative biopsy specimen contained no cancer. Therefore, it is believed that surgical adjuvant therapy of verrucous and squamous-cell carcinomas which occur in association with condylomata acuminata (and those which occur without pre-existing condylomata also) using radiation and 5-FU with or without mitomycin-C deserves further evaluation as a possible means of prolonging cancer-free survival in patients with apparently resectable malignancies, and as a possible means for rendering operable those lesions not resectable at presentation.

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