Scalp metastasis as a presenting symptom of Cervical Squamous Cell Carcinoma

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Precis:
Scalp metastasis of squamous cervical carcinoma is extremely rare, particularly at first presentation.

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Introduction

Cervical cancer spreads via local extension and lymphatic invasion. Hematogenous spread is rare, and is usually to the abdominal or thoracic viscera or to bone [1]. Cervical cancer metastatic to the scalp is extremely rare with only 7 cases reported. We report what we believe is the first case of a patient with scalp metastasis as one of the initial presenting symptoms of a cervical squamous carcinoma. Only consent for treatment was obtained, and therefore the description has been de-identified to protect privacy

Case Report

A woman in her fifties was seen in consultation for 2 months of vaginal bleeding and pelvic pain as well as scalp lesions that developed around the same time period. On examination there were multiple nodules sporadically dispersed about the vaginal canal and a cervix that was deviated due to a large posterior mass. There were four 1-2 cm flesh colored nodules on the scalp that were hard and mildly tender. The patient was in severe pain, and short of breath when lying down, due to pulmonary hypertension, so the initial biopsies were suboptimal. A cervical cytology smear was unsatisfactory. Vaginal biopsies showed fragments of benign squamous mucosa with areas of submucosal fibrosis and a rare minute fragment of atypical squamous epithelium in clotted blood. Computerized axial tomography of the abdomen and pelvis showed an ill-defined mass involving the cervix with distention of the endometrial canal, ill-defined soft tissue densities, innumerable nodules scattered throughout both lung fields, multiple positive retroperitoneal lymph nodes, and lytic lesions in the inferior pubic rami and T12 vertebral body. Due to her pulmonary hypertension, risk of bleeding from a lung biopsy was considered high risk, and she had not yet been cleared medically to undergo anesthesia and cervical biopsy. A scalp lesion from the left posterior region was biopsied and showed squamous cell carcinoma with positive deep margins

and no continuity with the overlying native squamous epithelium suggesting metastatic disease. P16 stain of the scalp biopsy was positive, consistent with high risk HPV. At this point, she had been medically cleared, and at the time of mediport insertion, a cervical biopsy was obtained and showed moderately differentiated invasive squamous cell carcinoma. A positron emission tomography(PET) scan performed confirmed cervical tumor extending to the lower segment of the uterus and inseparable from the rectum. The abnormal uptake also extended superiorly to the uterine wall bilaterally and inferiorly to the distal vagina consistent with bilateral parametrial and vaginal involvement. There were extensive pulmonary metastases, lymph node metastases in the mediastinum, retroperitoneum, and the pelvic wall, osseous metastases, a few foci of markedly increased radiotracer uptake highly suspicious for brain metastases, and three solid tissue lesions with intense uptake in the superior portion of the scalp, consistent with soft tissue metastases and a diagnosis of FIGO stage 4B. The patient is currently undergoing palliative chemotherapy and radiation.

Discussion

To our knowledge, this is the first report of scalp metastases at initial cervical carcinoma presentation. Cervical squamous cell carcinoma usually spreads through local extension, or lymphatic spread. Hematogenous spread is a late and infrequent occurrence, and usually results in spread to the liver, lungs and bone, especially in poorly differentiated subtypes [2]. A review of the literature disclosed 7 cases of scalp metastasis from cervical cancer. In none of these cases was scalp metastasis seen at initial presentation. Reported cases were seen in both early and late stage disease and in varying degrees of tumor differentiation [2-8]. Except for the case of Park et. al, and the current case, scalp metastasis was the sole metastatic site [6]. The majority of reported cases were squamous cell carcinoma, with only one reported case of metastatic adenocarcinoma [2].

Our patient had involvement of retroperitoneal and mediastinal lymph nodes, however the lack of supraclavicular lymph node involvement makes her bone and lung metastasis more likely due to hematogenous spread. The presence of rich vascularity, warmth and immobility of the scalp are thought to make the scalp as a favorable site of metastasis [2].

Scalp involvement in cervical cancer is rare, particularly at initial presentation. The differentiation of the scalp tumor was similar to the cervical tumor in our patient, and it is likely that the scalp metastases developed late in her course rather than due to dedifferentiation, although it is difficult to sequence the events as she did not present for care until she had advanced stage disease. Although a squamous cell carcinoma can be primary to the scalp, providers should consider the possibility of metastatic disease, particularly if other symptoms are associated.

Abbreviations and Acronyms

HPV-Human papillomavirus

PET-positron emission tomography

FIGO- International Federation of Gynecology and Obstetrics

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