CASE REPORT

Abdominal Scar Recurrence of Squamous Cell Carcinoma of Cervix Following Simple Hysterectomy

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Introduction

Carcinomas of uterine cervix recur most commonly locally after surgery and/or radiation therapy. The pelvis (parametrium or lymph nodes) and vagina are the most frequent sites of relapse. Distant metastases are rare, and usually observed in the lungs, bone, and liver [1]. On the other hand, the common primary sites of patients with skin metastases are the breast, large intestine, lung, and ovary. However, the incidence of incisional skin metastases from carcinoma cervix is extremely rare; incidence ranges from 0.1 to 0.2 % [2]. The present case is unusual because incisional skin metastasis was seen in squamous cell carcinoma cervix where patient did not receive any adjuvant treatment after simple abdominal hysterectomy and presented to us 2.5 years after surgery with skin and omental metastases.

Case Report

A 42-yr-old lady was referred to us on August 6, 2009 for lower abdominal mass. Her obstetric history was P5L5; her last delivery was 10 years back. Tubal ligation was done. Patient had total abdominal hysterectomy with bilateral salpingoophorectomy in December 2006 in a private hospital. Histopathology showed infiltrating squamous cell carcinoma. She was referred to higher center for radiotherapy, but she did not follow the advice. She presented to us with complaint of distension of abdomen since last 3 months. USG-guided FNAC from abdominal mass had been done outside on June 20, 2009. Report was highly suggestive of neoplastic lesion. On examination, her vitals were stable. There was no pallor. Neck, breast examination was normal. On per abdominal examination, we observed there was 8 × 10 cm mobile, hard mass in hypogastric region over scar area. Inguinal region was normal. On per speculum examination, vault was normal, and smear was taken. The vaginal walls were free. Bilateral parametrium was smooth and rectal mucosa mobile. On investigations, her hemogram, biochemistry profiles, and chest X-ray (postero-anterior) view, all were within normal limits. Vault smear was negative for intraepithelial lesion or malignancy. CT-scan showed large complex cystic lesion noted as involving lower anterior abdominal wall; lesion anteriorly extends subcutaneously, and posterior projects into peritoneal cavity. It shows thick irregular enhancing wall. It measured 118 × 85 mm in size. Exploratory laparotomy with removal of metastatic nodule from anterior

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abdominal wall and infracolic omentectomy were done on September 1, 2009 (Figs. 1, 2). Intraoperatively large 10×10 cm mass was seen adherent to anterior abdominal extending to pelvis; the mass was adherent to peritoneum over bladder. Liver, spleen, intestine, pelvic, and para aortic lymph nodes were normal. Omentum showed 3–4 metastatic nodules, the largest measuring 3×2 cm. Infracolic omentectomy was done. Defect in the rectus sheath was closed with prolene mesh. Postoperative period was uneventful. Histopathology report revealed squamous cell carcinoma, being moderately differentiated. Maximum tumor diameter was 10 cm, and tumor infiltrated the muscle. Skin was free of tumor. Lymphovascular invasion was not seen. All soft tissue resection margins were free of tumor. Omentum showed metastatic squamous cell carcinoma. Patient was referred to radiotherapist. Their opinion was “no role of radiotherapy.” She was referred to medical oncologist who advised three cycles of taxol and carboplatin which patient received. She is on regular follow up. Her last follow up was on August 16, 2010 with normal USG and vault smear.

Discussion

Metastatic carcinoma to the skin is an uncommon occurrence, with incidence rates of 5 % or less [1]. Metastatic carcinoma in abdominal wall incision has been frequently reported in cancers of colon, kidney, and bladder [2]. The presentation with a solitary metastasis at the site of surgical incision raises the question of the route of spread. After surgical resection with microscopically clear margins, solid malignant tumors recur locally in up to 50 % [3]. Although the effect of a local tumor recurrence on the overall survival may be low in common cancers such as carcinoma of the breast or prostate, the affected patients suffer from

Fig. 1 Abdominal Lump

Fig. 2 No disease in Pelvis

exacerbated fear and the burden of the secondary treatment. With some tumor entities such as carcinoma of the uterine cervix or carcinoma of the head and neck, a local recurrence indicates incurability in the majority of cases. Most scar recurrences are regarded as the result of the interaction of minimal residual microscopically occult cancer with the surgical wound environment inside a developmentally defined tissue or organ compartment [4].

A few authors have suggested tumor implantation of malignancy at the time of surgery as a mechanism for skin incision metastasis [5], while others have suggested the mode of retrograde spread of tumor secondary to the lymphatic obstruction [6].

The most common histopathology that has given rise to skin metastasis is adenocarcinoma and undifferentiated carcinoma, whereas it has been rarely reported from squamous cell carcinoma [7]. There has been no difference in the incidence of skin metastasis among the clinical stage [7]. Macroscopically, three common patterns (nodules, plaques, and inflammatory telangiectatic lesion) of skin metastasis have been seen [5].

The most common site of skin metastasis in carcinoma cervix is anterior abdominal wall (especially at the drain site), vulva, and anterior chest wall [7].

A prolonged disease-free interval (2.5 years) as seen in the studied case has been suggested by other authors as growth of a small tumor implant rather than tumor recurrence [5]. Khalil et al. in a series of four postoperative endometrial cancers reported the interval between the primary treatment and incisional metastasis as ranging from 1 month to 7 years. Furthermore, the immune status of the host was also advocated as one of the factors associated with the viability of the implanted tumor cells.

The interaction of occult tumor cells and surgical wounds may happen locally at the site of tumor resection as well as at distant remote from it at the sites of surgical access to the body cavities or compartments. If the migration of tumor cells detached from the primary

neoplasm is guided by positional information expressed within the developmentally defined morphogenetic unit, then the probability of occult tumor cells being present within or close to the local surgical wound created during the process of tumor resection should be much higher than the probability of their presence in remote wounds. Recurrences after tumor resection with microscopically free margins (R0) occur locally at the site of surgical resection in up to 50 %, whereas recurrences in the distant surgical scar are reported in only 1–2 % [8]. Once exposed to the wound environment, neoplastic cells receive various stimuli and experience conditions favoring the formation of a tumor relapse.

Although the local immunomodulating effects of the surgical wound during the different phases of healing may be complex, the established systemic immunosuppressive consequences of surgery should support the relapse formation. It can be assumed that most of the wound-associated tumor-promoting effects are related to the wound volume, especially to the extent of ischemia within a wound. Secondary healing wounds should therefore be more prone to support scar recurrence formation than wounds healing *per primam* [8].

The current principles of surgical oncology have to be revisited. A *radical tumor operation* must remove not only the macroscopic and microscopic tumor but also a maximum of the microscopically occult local cancer with a minimum of tissue trauma [8].

Skin metastases from cervical carcinoma occur predominantly in cases of tumor recurrences, with metastases

developing up to 10 years after initial diagnosis and averaging less than 1 year.

The intent of treatment in advanced recurrent disease is palliation by surgery, chemotherapy, radiation therapy alone, and/or in combination. Cis-platinum-based chemotherapy has been found to be an effective treatment in controlling the symptoms.

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