Case Report:

Metastatic pericardial effusion secondary to squamous cell carcinoma of uterine cervix: a rare case report

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Abstract:
Malignant pericardial effusion secondary to squamous cell carcinoma of uterine cervix is a rare event. Antemortem diagnosis of pericardial effusion is even rarer. Very few cases have been reported. We report a patient of squamous cell carcinoma of cervix with antemortem diagnosis of malignant pericardial effusion. Early diagnosis and aggressive treatment of pericardial effusion can help in decreasing complications thereby reducing morbidity and improve quality of life in these patients.

Key words: Pericardial effusion, Squamous cell carcinoma of uterine cervix

Introduction:
Pericardial metastasis is an unusual occurrence in carcinoma cervix; lung, bone and brain constitute more common sites of distant metastasis. Very few cases of malignant pericardial effusion due to squamous cell carcinoma of cervix have been reported in literature; most of them detected only in autopsies. In present case, we report antemortem diagnosis of cardiac metastasis in squamous cell carcinoma cervix.

Case report:
A 56 year old female presented with postmenopausal bleeding. Ultrasonograph (USG) showed hypertrophied cervix with a hypoechoic mass and bilateral hydronephrosis. Contrast enhanced Magnetic resonance imaging (CEMRI) pelvis confirmed the mass involving uterine cervix and showing enhancement with involvement of vagina and parametrium. Multiple enlarged lymph nodes were seen in left paraaortic, inguinal, internal and external iliac and right common iliac region. Biopsy from cervix revealed moderately differentiated squamous cell carcinoma and the patient was staged as FIGO stage III B.

Chemotherapeutic drugs carboplatin, paclitaxel and radiotherapy resulted in symptomatic relief to the patient. Follow up Magnetic resonance imaging (MRI) showed partial regression of tumor. After chemoradiotherapy follow up Positron Emission Tomography-Computed tomography (PET-CT) showed no evidence of hypermetabolism in cervix but metabolic activity remained in left paraaortic, mesenteric, right common iliac and right external iliac regions. Six months later she developed dyspnea that progressed to orthopnea over last 10 days along with weakness, dizziness. On examination she had tachycardia and hypotension. CT angiography showed massive pericardial effusion and bilateral pleural effusion. Therapeutic/palliative pericardiocentesis was performed and about 500 ml of serosanguinous pericardial fluid was drained. Cytological examination of fluid revealed atypical cells suggestive of squamous cell carcinoma. Tumor cells showed positivity for cytokeratin and were negative for calretinin. Palliative chemotherapy and radiotherapy resulted in symptomatic improvement in the patient.
Discussion:
Worldwide carcinoma of uterine cervix is the second most common cancer occurring in women. Pericardium is uncommon site of metastasis in squamous cell carcinoma of cervix while melanoma, sarcoma, lymphoma, lung carcinoma and breast carcinoma are the common tumors metastasising to pericardium. Incidence of cardiac metastasis from cervical carcinoma is between 1.2% to 7%. Pericardial effusion, atrioventricular block, cardiac tamponade, tachyarrhythmias, congestive heart failure indicate cardiac metastasis, a sign of advanced disease. Carcinoma cervix first involves vaginal mucosa, pelvic wall then paraaortic and iliac nodes and subsequently to distant organs like lung, bone and brain. Pericardial involvement is usually diagnosed on post-mortem examination but can uncommonly get noticed in antemortem period due to development of pericardial effusion and rarely cardiac tamponade.

Strong clinical suspicion in combination with current simple and advanced diagnostic modalities like chest X Ray, Echocardiography, CT scan, MRI scan, \(^{18}\)F-FDG-PET scan, transvenous biopsy and effusion fluid examination can help in making diagnosis. There is no standard treatment protocol for management of cardiac metastasis. Survival period after diagnosis of malignant pericardial effusion has been reported as about only 4 months but prognosis including quality of life can be improved by aggressive therapy with surgery and chemoradiation.

Conclusion:
Although cardiac/pericardial involvement in carcinoma cervix is infrequently seen, it is life threatening condition. High index of clinical suspicion, early diagnosis and aggressive palliative treatment approach can increase the survival period and improve quality of life in such patients with terminal stages of disease. Pericardiocentesis and cytological examination adds to the armory of diagnostic tools.
References:

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