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Case Report

Cardiac metastases from a gynecological malignancy presenting with tamponade: A rare and potentially life threatening medical emergency

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ABSTRACT

Cardiac malignancies are a rare occurrence and are usually metastatic and the common sources are lung, breast or hepatic but having a gynecological malignancy causing metastases to the heart is extremely rare and seldom described.

We are describing the case description of a middle aged woman who was a known case of carcinoma cervix having received radiotherapy but had not been cured of her malignancy, and presented to us in pericardial tamponade which had occurred due to the malignancy having metastasized to her pericardium. The patient underwent therapeutic pericardiocentesis but the fluid kept on re-accumulating subsequent to which the patient was offered chemotherapy which she refused and finally succumbed in around four months. This case forms an interesting opportunity to recognize the fact that gynecological malignancies may metastasize to the heart which is of vital information to the cardiologists, oncologists and gynecologists who regularly come across cases with malignancies this might help in early recognition and correlation of the symptoms.

1. Background

Cardiac malignancies are a rare occurrence and are an unusual cause of cardiac symptoms. Cardiac metastases of malignant neoplasms are rare and the most common site is the pericardium which is the most common target in the heart where secondary neoplastic involvement is seen. It usually manifests as pericardial effusion, cardiac tamponade or constrictive pericarditis.[1] Carcinoma of the lung and breast, lymphomas and leukemia constitute the large majority of the malignancies which cause pericardial metastasis and can affect the other parts of the heart as well.[2]

Gynecological malignancies metastasizing to the heart is an extremely rare and clinically important finding which needs to be kept in mind in dealing with such patients which can be a cause of acute decompensation and may lead to sudden death in such patients. We are reporting a rare case of

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a patient presenting with a pericardial effusion and cardiac metastasis from the carcinoma of the cervix. Majority of such cases are reported post-mortem and only a few cases of ante-mortem diagnosis are reported in the literature which may helpful in the acute management and can be lifesaving. We present here a case of carcinoma cervix with malignant pericardial effusion, which was diagnosed and managed ante-mortem.

2. Case description

A 50-year-old female had been previously diagnosed to have carcinoma of the uterine cervix, two and a half years ago, in a cancer hospital. The tumor was a squamous cell carcinoma of the ulcero-infiltrative involving both the lips of the cervix, bilateral parametrium, and the vaginal wall. The patient had been previously treated with radiotherapy. She was treated with intrauterine brachytherapy and teletherapy. The patient had responded to the therapy and the tumor burden had decreased although she had not been completely cured. She had been under regular follow up with the oncologist but she had never been diagnosed of any cardiac involvement at any point of time prior to presentation at our hospital.

The patient presented to our hospital, a tertiary cardiac care center, with progressively increased exertional fatigue and dyspnea which had exacerbated since the last 15 days. There was no history of fever or chest pain or symptoms pertaining to involvement of any other organ system or any evidence of any form of systemic illness or malignancy.

Her ECG at the time of presentation now showed low voltage recording, sinus tachycardia with prolonged QT interval and flat T wave. The echocardiogram showed the presence of massive pericardial effusion with evidence of cardiac tamponade (Figs. 1 and 2; Videos 1 and 2). However no pericardial nodules/intra-cardiac mass/myocardial infiltration was noted. Pericardial tapping was done as an emergency procedure in view of the presence of tamponade and the patient was relieved of her symptoms. The pericardial fluid was hemorrhagic and showed cells in groups and also single, with cellular and nuclear pleomorphism and hyperchromatism. The smears were prepared from the fluid and stained with Giemsa and Papanicolaou stain. Cell block was prepared from the sediment (Figs. 3–5). The smears and sections from cell-block showed malignant cells in clusters and also in single in a hemorrhagic background. The cells are polygonal, poorly differentiated and non-keratinizing.

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The episode of pericardial effusion was possibly due to metastases of the tumor to the pericardium. The pericardial fluid subsided after pericardiocentesis but there was gradual re accumulation of the fluid after 3 weeks .The patient was advised to consult her oncologist for further treatment.

However the patient was unwilling to take chemotherapy and was lost to follow up. The patient subsequently succumbed to the disease and died after 4months.

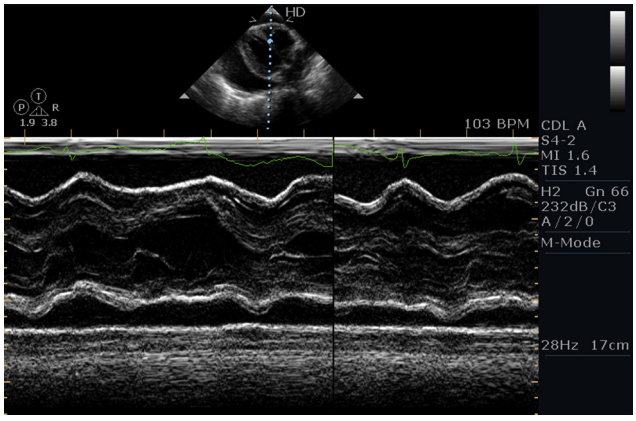

Fig. 1 – Parasternal long axis view showing RV diastolic collapse suggestive of collapse.

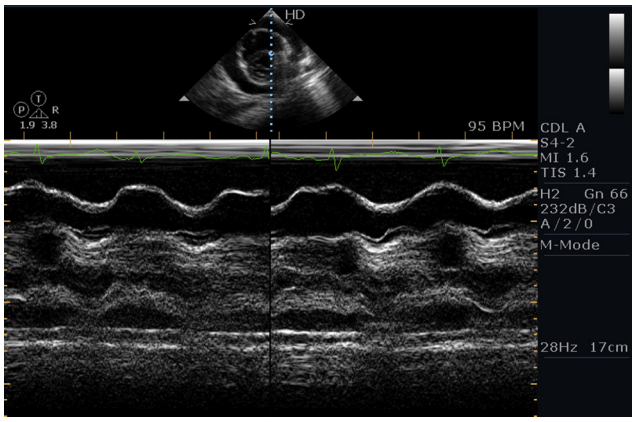

Fig. 2 – Modified parasternal long axis view showing RVOT collapse.

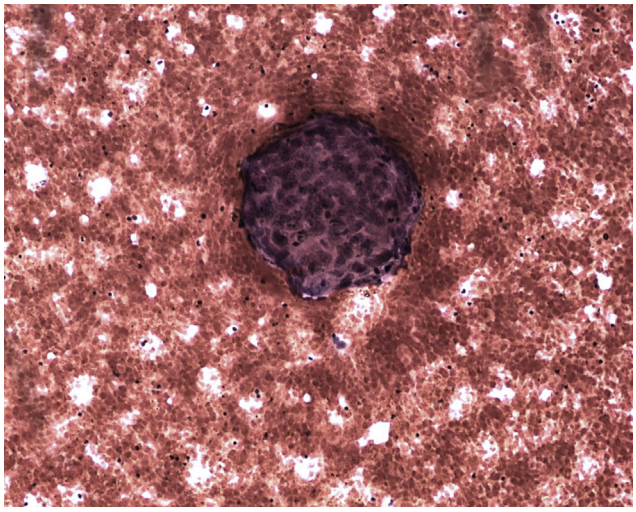

Fig. 3 – Photograph of the smear of the pericardial effusion showing malignant cells in clumps stained with Papanicolaou stain with a magnification of 10×.