Isolated Cardiac Metastasis From a Primary Breast Carcinoma: An Autopsy Report

Sir,

Cardiac tumours represent rare conditions, accounting for only 0.068% of hospitalizations in a tertiary cardiology centre. In postmortem studies, the primary cardiac tumours are found in the range of 0.001-0.28%. The overall reported cardiac neoplasms rate was 2.33% in a total of 11,432 autopsies in one study. Cardiac metastasis entails the tumour infiltration into the pericardium, epicardium, myocardium and endocardium. The tumour invades the heart either directly or through the blood stream, lymphatics or as tumour emboli into the right atrium. This letter describes an isolated cardiac metastasis from a primary breast carcinoma in an autopsy.

The patient was a 63 years old lady presented to the Accident and Emergency A&E Department with complain of tiredness, generally unwell, reduced oral intake and shortness of breath. On admission, she was found to be dehydrated. ECG showed sinus tachycardia with sudden deterioration and asystole. Resuscitation was unsuccessful and she passed away within 24 hours of her admission.

The recent past history showed diagnosis of breast carcinoma being treated with chemotherapy. Three weeks before her death, she had a mastectomy with axillary clearance showing 6 cm, grade 3 invasive ductal carcinoma with 26 positive lymph nodes. As this was a sudden death with unknown cause, therefore, the case was referred to Her Majesty Coroner and a postmortem examination was carried out.

The postmortem examination revealed haemorrhagic pericarditis extending upto the adventitia of the large vessels. The epicardium was vaguely nodular and suspicious for carcinomatous involvement. The myocardium was involved by variable sized nodules, the largest of which measured 2 cm in diameter being present in the left ventricle. No evidence of localised recurrent tumour was seen in the mastectomy scar. No evidence of metastatic disease was seen in any other organ.

Postmortem histological sections had been taken showing extensive carcinomatous involvement into the pericardium, epicardium and myocardium (Figure 1). The tumour cells were poorly differentiated, and were strongly positive with pancytokeratin and patchily reactive to CK7 consistent with metastasis from primary breast carcinoma (Figure 2).

The breast cancer case was discussed in the multi-disciplinary breast team meeting as per protocol and the decision to give chemotherapy was based on the high Nottingham Prognostic Index and clinical/pathological staging. At that time, there were no radiological or clinical suspicion about cardiac metastasis. It appears that there would be tiny metastasis which was asymptomatic and radiologically unrecognisable and that focus flared up postoperatively leading to extensive cardiac involvement and sudden death. The florid growth of cardiac metastasis to attain the dimensions as described above within 3 weeks of primary excision indicates the high proliferative index of the carcinoma.

The incidence of cardiac metastases in the autopsies showing tumours is reported in a range from 2.3%-18.3%. The cardiac metastasis as a sequence of systemic metastasis is well recognised in breast cancers; however, it is hard to find isolated cardiac metastasis from the breast in the literature. Bussani et al. had mentioned presence of only two cases of isolated cardiac metastasis from the breast primary out of 18751
postmortem examinations. Therefore, this appears to be a rare event in the natural history of breast carcinoma in particularly within a month of primary excision.

REFERENCES


Correspondence:

MUHAMMAD BABAR ASLAM
21, Hollwhead Avenue,
Blackburn, United Kingdom, BB 19LD.
E-MAIL: mbaslam@yahoo.com