Metastatic embryonal rhabdomyosarcoma to the breast: a case report and review of the literature

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Introduction:

Metastatic neoplasms to the breast from extramammary neoplasms are rare, with an incidence of 0.5% to 3%. Although rhabdomyosarcoma is the most common soft tissue sarcoma in children, metastatic deposits to the breast rarely occur and are mainly seen in adolescent girls. We report an uncommon case of breast and lymph node metastases from embryonal rhabdomyosarcoma.

Case description:

A 19-year-old fertile Caucasian female, with a medical history of embryonal rhabdomyosarcoma in the left upper extremity at the age of 17, presented with enlarged lymph node of left axilla. Fine needle aspiration (FNA) cytology of axillary lymph node revealed a metastatic malignant neoplasm, consistent with the primary embryonal rhabdomyosarcoma. Four months later, breast clinical examination revealed the presence of multiple hard and immobile masses located in both breasts. Ultrasound detected multiple opacity areas and ultrasound-guided FNA cytology was performed on two bilateral breast lumps. The final cytology diagnosis of FNA -using ThinPrep® technique- was “Positive morphologic and immunocytochemistry findings of metastatic malignant neoplasm of mesenchymal origin, consistent with patient’s history-embryonal rhabdomyosarcoma”. Today the patient is under first line chemotherapy and in good physical condition.

Discussion:

Our case illustrates the metastatic multi-organ potential of rhabdomyosarcoma and highlights the formidable value of FNA cytology to the diagnosis and application of optimal treatment. According to our bibliographic data, only few similar cases exist. Thus, breast examination should be part of the routine clinical examination for female survivors of primary rhabdomyosarcomas.
Keywords: Breast, rhabdomyosarcoma, metastases, fine needle aspiration, cytology

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References:


