ADOLESCENT BREAST MALIGNANCIES IN ISRAEL

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Abstract

Malignant tumors of the breast in adolescent females are very rare. These tumors account for less than 1% of all childhood malignancies.

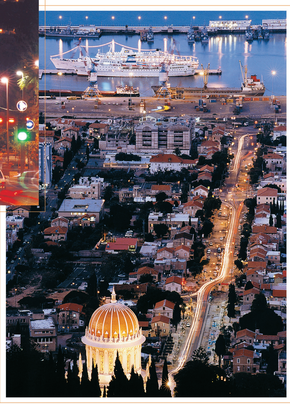
This review is based on a through study of adolescent breast tumors in Israel over a 22-year period (1967-1989).

Malignant tumors were identified in a total of 7 patients ranging in age from 14 to 17 years.

The clinical presentation, histopathological features, therapy and prognosis for each patient are discussed.

The Baha'i Gardens on Mount Carmel - Haifa

Haifa City - Downtown



Introduction

Breast cancer in childhood and adolescence is very rare. It accounts for less than 1% of all childhood cancers and less than 0.1% of all breast cancers. The incentive for this study was the diagnosis of 7 girls aged between 14 and 17 years, presenting with breast malignancies, who were treated in different hospitals in Israel. The paraffin blocks of the biopsies of the 7 patients were reevaluated using current immunohistological methods so as to obtain a uniform and updated histopathological representation and terminology.

Patients profiles

Patient	Age/Sex	Symptoms: description and duration	Physical findings (size of mass)	Histopathology axillary lymph nodes	Treatment	Diagnosis	Follow up
1	16/F	Pains, bloody discharge of left nipple, irregular menstruation, pallor	Mass 15x15x15 cm, crusting	Undifferentiated carcinoma, 12 lymph nodes - positive	Incisional biopsy + irradiation chemotherapy, oophorectomy hormonal trearment	6/67	Died 25/2/68
2	16/F	Not recorded	2 masses 5 cm, fixation of skin	Undifferentiated carcinoma, 13 lymph nodes - positive	Modified radical mastectomy	22/11/72	Died 1/73
3	17/F	Enlargement of right breast	Mass 4x3 cm, crusting	Cystosarcoma phyllodes, low grade malignancy	Excisional biopsy followed by wide excision at 1 year	8/82	Died 3/84
4	16/F	Enlargement of right breast for 5 months, retraction of skin, bloody discharge of nipple	Hard mass	Mlignant cystosarcoma phyllodes	Modified radical mastectomy + irradiation + chemotherapy	2/79	Died 8/3/82
5	14/F	Pains in left breast, fever 3 months duration, left facial nerve paralysis	Mass 6x5x3 cm, tenderness, enlarged lymph nodes, left axilla	Malignant lymphoma, diffuse large cell	Incisional biopsy + irradiation + chemotherapy	1/74	Died 10/6/74
6	15/F	Pains and swelling right breast, pains right shoulder, fever	Mass, tenderness, cafe' au lait spots on right cheek	Alveolar rhabdomyosarcoma	Incisional biopsy + irradiation + chemotherapy, laminectomy, excision of tumor	10/74	Died 5/3/76
7	15.5/F	Pains and swelling in left breast	Mass 7x6x7 cm, tenderness	Burkitt's lymphoma	Incisional biopsy + chemotherapy	12/9/84	Died 15/4/85

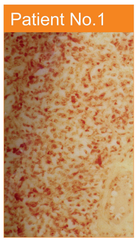
Patients

- 2 carcinomas
- 2 malignant lymphomas
- 2 malignant cystosarcoma phyllodes
- 1 alveolar rhabdomyosarcoma

Methods

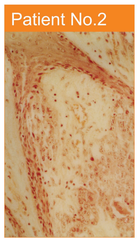
- Case records of the Ministry of Health Cancer Registry covering 22 years were reviewed and 7 patients with breast malignancies were diagnosed.
- Patient chart and paraffin embedded tissue blocks were obtained for each case.
- The histopathology of each tumor was reassessed by a pathologist, and in some instances immunohistochemical techniques were performed to aid in the diagnosis.

Patient No.1



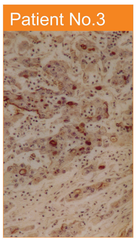
Undifferentiated carcinoma. Note large nuclei,prominent nucleoli and high mitotic rate.

Patient No.2



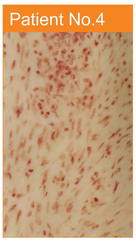
Infiltrating duct carcinoma of breast. The cells show pleomorphism and invade the connective tissue.

Patient No.3



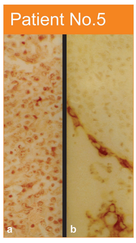
Staining with CA15-3.

Patient No.4



Malignant carcinoma phyllodes. Note hypercellular stromal cells compressing ductal structure.

Patient No.5

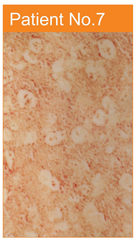


(a and b)
a. Histopathological section showing diffuse large cell lymphoma.
b. Immunoperoxidase staining with anti-cytokeratin. Note that the tumor cells are negative whereas the normal ducts are positive.

Patient No.6

(a and b)
a. Rhabdomyosarcoma of breast alveolar type.
b. Immunoperoxidase staining with vimentin is positive; staining with anticytokeratin and antileukocytic common antigen-negative.

Patient No.7



Burkitt's lymphoma of the breast showing typical "starry sky" appearance.

The correct nature of a tumor is often only revealed by immunohistochemical studies.

Conclusions

- **Carcinoma of the breast in adolescents is very rare.**
- **The majority of tumors present as solid masses.**
- **Tumors in the adolescent age group have a uniformly poor prognosis. All of the 7 patients studied succumbed from their disease.**