

Breast Cancer in a Twelve Years Old Boy; Case Report and Literature Review

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Abstract

Breast cancer is very rare in childhood, <1% of all children cancers, and less than 0.1 % of all breast cancers. [1] We report a case of 12 years old boy, who was diagnosed in September 2011 as a case of secretory breast cancer, SBC, T2 N0 M0, triple negative breast cancer, TNBC. Successfully treated with a mastectomy and axillary clearance only, and is free of disease when last seen in Feb 2016.

Introduction

Male breast cancer is rare in children, forming <1 % of all cancers [1]. The first case of secretory breast cancer in children was reports by McDevitt and Stewart in 1966 [2]. For no known reason breast cancer in children is usually secretory type, SBC, is more in female children, is extremely rare in males. Usually triple negative and is less aggressive than in adults [2]. Murphy et al reported a case of breast cancer in a 6 years old child [3]. And Szantoa et al reported a 7.5 years old boy with SBC [4].

Case report

A twelve years old Sudanese boy presented in Sept 2011, with a three month history of a left breast 4x3 cm firm, not fixed lump, no enlarged axillary nodes, no symptoms, no significant past history or family history. Ultrasound reported 3x3 cm irregular mass, no axillary nodes enlargement, a true cut biopsy confirmed an invasive ductal cancer, grade 2, triple negative, secretory breast cancer, Ki67 = 12 %, CXR, US, CBC, UE and LFT were all normal, stage T2 N0 M0.

The parents and the child were counseled, and informed

consent was taken. Then, he was treated with a mastectomy and axillary clearance, pathology reported, 3x2 cm mass, good negative margins minimum 0.5 cm, grade 2 Secretary breast cancer, same receptors results, no lymphovascular invasion or peri-neural invasion, no DCIS or intraductal component. There was no indication for radiotherapy or chemotherapy. He remained well, with no evidence of disease when he was seen 3 months ago, in Dec. 2015.

Discussion

To our knowledge this is the second case of secretory breast cancer in a boy reported from Sudan, the first case was reported by Aamir et al in 2012, an 11 years old boy with secretory breast cancer [5]. Our case was diagnosed at an early stage. So, was successfully treated, with a mastectomy and axillary clearance only.

Breast cancer is rare in adults forming about 1% of all breast cancers and extremely rare in children. So, there is no clear guidelines for treatment of male's breast cancer and treatment protocols are extrapolated from female breast cancer studies and guidelines [6]. Risk factors include, liver cirrhosis, Kleinfilters syndrome, BRCA 1, 2 mutations, obesity, and past history of chest irradiation [7].

Most breast cancers reported in children are secretory breast cancers, this was first described by Mc Devitt and Stewart in 1966 [2]. Secretary breast cancers is a distinct type of invasive ductal cancer which are usually triple negative, lack Ki -67 expression and has an indolent behavior. Recent research have shown that, they belong to the phenotype spectrum of basal like breast cancers, there most remarkable feature at microscopy is the presence of intracellular and extracellular



Fig. 1. showed the case of the male child diagnosed with breast cancer

secretory material. [8] However some studies have reported SBC positive for ER and PR receptors. [8] Cesar Cabello reported nine cases of male children secretory breast cancers [9].

Gutierrez reported 75 cases of breast cancer in children, 14.5% were carcinoma in situ, 85.5 invasive cancers, of which 54.7% were carcinomas, and 45.3% sarcomas, 85% of sarcomas were phyllodes tumors, most carcinomas were ductal, 46.3%, stage distribution was 26.8% locally advanced, 7.3% metastatic, and 65.9% were early cancers [10]. In children most phyllodes tumors are benign with postoperative recurrence rate of 10-15%, malignant phyllodes tumors form 40% of cases. [11].

Ultrasonography is ideally suitable for the evaluation of breast lumps in children. Axillary involvement and distant metastases is rare, especially in SBC [4]. The main line of treatment for SBC and other types of breast cancers in children is surgery, mastectomy with or without axillary clearance [12, 13]. In early stages if the SNB is positive, axillary clearance is performed [14]. Radiotherapy is given if there are risk factors for recurrence putting in mind its long term complications e.g. chest deformity and development of neoplasms [14].

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