Role of ultrasound in evaluation of pediatric and adolescents breast masses

Essay

Submitted for partial fulfillment of master degree in

Radio-diagnosis

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2012

بسم الله الرحمن الرحيم

﴿يَرْفَعِ اللَّهُ الَّذِينَ آمَنُوا مِنكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ

دَرَجَاتٍ وَاللَّهُ بِمَا تَعْمَلُونَ خَبِيرٌ ﴾

صدق الله العظيم

المجادلة (أية 11)

Acknowledgement

First and last praise to ALLAAH

It is a great honor to express my sincere gratitude and appreciation to Pro Dr. Soha Talaat Hamed, professor of radio-diagnosis, faculty of medicine, Cairo University, for her unfailing interest, untiring help, instructive criticism, keen supervision and support.

I am very deeply obliged and grateful to Dr.Rasha Wessam Abd Alrhman, lecturer of radio-diagnosis, faculty of medicine, Cairo University, for her kind suggestion, enthusiasm, valuable advice and scientific supervision.

Finally this work could not have happened without my lovely family and my dear friends who always supported me in everything.

Dedicated to

My father and my Mather, for their love & encouragement

My brothers and sisters, for their support & love

To the souls of all Libyan revolution martyrs, who sacrifice for our homeland

Allah rest their souls in heaven paradise

ALSO to the wounded who still suffering with best wishes for recovery

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List of Abbreviation

Abbreviation	Full name
ALL	Acute lymphoblastic Leukemia
BRCA1&BRCA2	Symbol stands for Breast CAncer
COG	Children's Oncology Group
CPP	Central Precocious puberty
CT	Computed tomography
FNA	Fine needle aspiration
FSH	Follicular stimulating hormone
GnRH	Gonadotrophin releasing hormone
IPN	Intraductal Papilloma Neoplasm
JHB	Juvenile Hypertrophy of Breast
JP	Juvenile papillomatosis
MR	Magnetic resonance imaging
NF1	Neurofibromatosis
PASH	Pseudoangiomatous Stromal Hyperplasia
PT	Phyllodes Tumor
RMS	Rabdomyosarcoma
SBE	Self breast examination
SEN	Scalp-Nipple -Syndrome
SMR	Sexual Maturity Rating
TB	Tuberculosis
US	Ultra Sound

Abstract :-

Pediatric and adolescents present with a spectrum of breast diseases include congenital, Infections, trauma, endocrine disorders and neoplastic.

Biopsy is contraindicated as this may lead to significant breast deformity so knowledge of the sonographic appearance of normal breast development and specific lesions is most helpful in identifying and characterizing abnormalities.US has wide acceptance because of density of breast at this age and its lack of radiation hazards.

key words:-

Breast masses / Diagnosis by Ultrasound / Pediatric and adolescents.

Introduction

Introduction

The discovery of breast **masses** in children and adolescents often causes **tremendous** parental and physician concern , so knowledge of the spectrum of pathologic conditions that affect the pediatric breast allows the radiologist to play an important role in providing age appropriate differential diagnosis (Chung et al , 2009).

The knowledge of the **various** breast pathologies and diagnostic evaluation are needed to reassure the patient and the parents and to avoid missing any rare malignant lesion (Fallat et al, 2008).

The **diseases** of breast lesions in children and adolescents vary markedly from that for adults, with the former lesions being overwhelmingly **benign.** A breast mass in a young boy or girl may **arise** from normal and abnormal breast development; other **causes** of masses include infection, fat necrosis after trauma, cyst, malignant lesions of the breast in children are rare. The most common malignant lesions are metastases (Chung et al, 2009).

In **contrast** to adults, mammography is **contraindicated** in children because of (**1**) the increased **risk** of radiation-induced malignant changes in the young glandular breast, (**2)** poor image quality due to **dense** fibro-glandular breasts (Brandt et al, 2006).

So the initial breast imaging study performed in pediatric patients is **sonography** whereas mammography is reserved for selected cases (Chung et al, 2009).