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BREAST LESIONS IN ADOLESCENCE : AN INSTITUTIONAL EXPERIENCE

General Surgery

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Introduction:
Breast development during adolescence is the first sign of puberty in young girls and an important marker of the transition to adulthood. (1) The spectrum of breast diseases in this age group is generally different from that in the adult females. (2)

Breast lesions in adolescent girls are fortunately an uncommon presentation with most of the lesions turning out to be benign and the risk of malignancy is very low. (3)

Most important diagnostic imaging method is sonography as it is non invasive and radioation free. (4,5) Fine needle aspiration cytology (FNAC) is being performed both free hand and under radiological guidance as a pre-operative test and it is proven to be cost effective. (6,7)

Most common breast lumps in adolescence are single and multiple fibroadenomas. Fibrocystic disease is another common clinical diagnosis. (8,9,10)

Infrequent occurrence of malignancy in young females has been a common observation. (3)

Materials and Methods:
Clinical presentation, diagnosis and management of the breast disease in adolescence are discussed in this study. The aim of this article is to assess the prevalence of breast diseases in young adults and to evaluate the histopathological nature of these lesions excised from patients younger than 20 years of age, admitted to IIMSR Hospital, Lucknow during the period from April 2013 to March 2017.

Targeted history including family history, physical examination supported wit sonography and FNAC are key to patients' management in this series. Patients' data included age, sex, parity, family history of breast cancer and the tumour size.

All the cases after clinical assessment, basic investigations underwent breast sonogrpahy and FNAC to achieve a preliminary diagnosis. Finally, each tumour was subjected to histopathological study to establish a final diagnosis.

Results:
Clinical and sonological evaluation with FNAC result confirmed the diagnosis of all cases. The age of the patients ranged from 12 to 20 years, the mean age being 15 years.

Four patients stated to have had a pregnancy earlier.

No patient had family history of breast cancer. 12 patients had multiple breast lumps in one or both the breasts. 6 patients were found to have bilateral breast lesions.

The lesions ranged from 2 cm to 8 cms in size. As expected the most common histological findings in this series were fibroadenoma. Three cases of phyllodes tumour were recorded. One of them was an obstetric patient, who had recently delivered a male baby. Another girl aged 18 years had fairly big size tumour weighing 800 gms with cystic necrosis. The third case, a still younger school girl had multiple lesions in one breast. The bigger one was phyllodes and other lumps fibroadenomas. Primary carcinoma of the breast was reported in one student aged 19 years on FNAC.

One case of galactocoele in lactating mother was another interesting finding. Mastitis and acute abscess was found in 4 cases, two of them were lactating. Here one girl had a small lump with thin discharge which on FNAC was found to be tubercular mastitis.

In 8 young boys, the only lesion responsible for breast lump was gynaecomastia; two of them had bilateral disease.

Discussion:
Breast tumours in adolescents are uncommon and occur predominantly in females. The commonest in young girls was fibroadenoma seen in 52 cases with fibrocystic disease being the next common diagnosis which is consistent with related literature. (9,10,11,12)

It also happens occasionally during physical examination and sonography of female breasts, another fibroadenoma may be noticed either in same or opposite breast. (13)
Such occurrence was seen in 6 cases and multiplicity of the lumps was noticed in 12 patients.

Another salient feature of the present study was exceptionally large size of the fibroadenomas ranging from 1 to 8 cms in size. This was quite a contrast to observations noticed in western countries where one seldom sees a fibroadenoma more than 2.5 cms in size. (12)

This shows that in our country the patients generally report to the hospital when the lump has acquired sufficient size. The main cause for this delay is that the patients are either shy to report their symptoms, or of being examined by a surgeon or first try the usual indigenous medicines to avoid surgical intervention.

We collected three cases of phyllodes tumour in this study. It is the most common primary breast malignancy in adolescence. (14) Local recurrence is approximately 25%. About 10% are expected to metastatize. (15,16). These teenagers have shown fairly bulky masses of significant weights ranging from 300 gms to 800 gms, like fibroadenomas in our series.

Primary carcinoma of the breast in adolescents are even rarer than phyllodes tumour. The incidence in less than 0.1% of all breast cancers. We have documented one case in this study. Clinically, the lump appeared to be benign but on sonography and FNAC, it was reported to be carcinoma. These findings are consistent with what is described in literature. (3,7,17,18) High incidence of 4.7% was reported in a series by Muy Khen et al in 2009. (12)

A galactocoele is a cystic collection of breast milk. They are frequently seen in lactating women and rare in children. They usually present as a palpable mass and can be variable in echogenicity. Occasionally fat fluid levels can visualised.(4,19) Two cases of galactocoele in young lactating mothers of 17 and 20 years of age were documented. Both were treated with surgical excision and milk suppression.

Another interesting finding noticed was breast abscess in 4 young girls which is quite rare in this age group but two of them were lactating mothers. Common pathogens include stap aureus, gram negative bacilli and group A streptococcus species. Ultrasound in helpful in differentiating mastitis from abscess. (20) Antibiotic therapy is the treatment of choice with incision and drainage or ultrasound guided aspiration of abscess(14) One young mother had a small lump with this

discharge which on FNAC and sonography was found to be tubercular mastitis. She was put on antitubercular treatment to which she responded well. Mastitis in non lactating females can also occur.

Eight young boys ranging from 9 to 13 years of age were included in this study. The only lesion responsible for breast lump in these males was gynaecomastia and two of them had bilateral disease. Gynaecomastia is the excessive development of breast tissue in male breast and is generally physiological in nature and a benign process. (21) Physical examination and sonography is often enough for the diagnosis with the help of FNAC. Standard treatment remains the excision of the breast tissue mass leaving the nipple and areola intact.

Conclusion:

When paediatric patients present to their family physician with possible breast abnormality, parental concern if often high. Ultrasound is the preferred imaging tool and FNAC can be used to both characterise benign physiological changes as well as more neoplastic lesions of the breast. As with any needle guided procedure, careful radiological and pathological correlation is required to ensure accurate diagnosis. The incidence of the malignancy in teenage is low, but our series documented its occurrence. Our study shows the need for compulsory histopathological evaluation of all masses clinically diagnoses as fibroadenoma. We also recommend self examination of the breasts in order to detect the lump at an early stage and to make general public conscious about the significance of breast lump.

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