

Diagnostic dilemma of ectopic breast in axillary region among the patients attending tertiary care hospital in rural India

Mani Krishna, Seema Dayal

Associate Professor (Pathology) RIMS&R, Saifai Etawah, (U.P.) India

Correspondence

Dr. Seema Dayal,
Dept. of Pathology,
RIMS&R, Saifai Etawah, (U.P.)
India
Email:
seemadayal77@gmail.com

DOI: <http://dx.doi.org/10.3126/jcmsn.v12i2.14608>

Article received: March 1st 2016
Article accepted: June 26th 2016

ABSTRACT

Background & Objectives: Breast developmental anomalies are common. Normally there are two breasts with nipple and areola. When it is more than two breasts, it is called polymastia. It can also be known as ectopic or accessory breast. Diagnosis is must because it shows same disease conditions which are seen in normally occurring breast tissue. The aim of present study was to know the clinical characters, symptoms and microscopic pathological, physiological changes seen with patients diagnosed with axillary accessory breast tissue. **Materials & Methods:** Present study was conducted in tertiary care hospital in cytology and histopathological section of pathology in the period from January 2013 to December 2015 on axillary swelling. FNAC & histopathology were diagnostic tool. **Results:** The minimum age of patients with accessory breast was 10 years and maximum was 35 years, maximum number of patients; 12 (54.54%) belonging to 21 to 30 years age group. Common clinical complaint was swelling axillary region (100%). Among these patients, 21 (95.45 %) were female only one (4.54%) patient was male. Bilateral swelling was found in eight (36.36 %) cases. Clinically lipoma was most common provisional diagnosis in eight (36.36%) patients. **Conclusion:** Ectopic breast tissue usually presents with axillary swelling. In axillary swelling along with lipoma, lymphadenopathy, neurofibroma, sebaceous cyst accessory breast as a diagnosis should be kept in mind. Every axillary swelling must be examined because it can be accessory breast tissue.

Key words: Accessory breast; Ectopic breast; FNAC

Citation: Krishna M, Dayal S. Diagnostic dilemma of ectopic breast in axillary region among the patients attending tertiary care hospital in rural India. JCMS Nepal. 2016;12(2):74-7.

INTRODUCTION

Aberrant breast, supernumerary breast, supernumerary breast or ectopic breast is a term that is defined as the presence of more than two breasts with or without a nipple and areola. Breast develops at fifth and sixth intrauterine life from thickening of ectoderm, known as the mammary ridge, appear in axillary to inguinal region, called milk line.¹ Due to some embryological migration and displacement, accessory breast tissue may be found elsewhere other than the milk line. Other site for breast are knee, thigh, buttock, face, ear, and neck,² axilla being common one.³ Ectopic breast may also present as accessory breast. It is common in women, incidence is two to six percent.^{4,5} Accessory breast are more common in Japanese population.⁶

Breast tissue presents in many forms, from inconspicuous accessory nipples to fully formed and functioning supernumerary breasts.

Classification has historically been according to the classes developed by Kajava⁷ in 1915. The ectopic breast acts as normal breast tissue. So pain, tenderness, and milk secretion can occur with fluctuating hormonal levels from puberty, menstruation, pregnancy and lactation. EBT can appear any age group but more often puberty and during pregnancy.⁸

Polymastia and aberrant breast tissue may mimic as lipomatous swelling, lymph node enlargement, sebaceous cyst where as polythelia is commonly mistaken for a benign nevus.⁹ It is not unusual to find benign and malignant pathologies in ectopic breast, so the diagnosis is important.¹⁰ Tissue diagnosis is obviously the gold standard for accessory breast tissue. So this study was planned with an objective to know the clinical characters, symptoms and microscopic pathological and physiological changes seen in patients diagnosed with axillary accessory breast tissue.

MATERIALS AND METHODS

This study was conducted in cytology and histopathology section of pathology department of UPRIMS & R Saifai, Etawah (U.P) India from January 2013 to December 2015. One hundred and thirty three cases of axillary swelling were examined by FNAC and Giemsa, H&E, Pap stains were applied on smears. Twenty two cases were diagnosed as ectopic breast tissue in axilla. For histopathology all formalin fixed specimens were thoroughly examined grossly and sectioned on three to four um. H & E stain was applied if required additional sections were also taken. Detailed clinical history and relevant clinical findings were also taken in predesigned proforma.

RESULTS

The minimum age of patients with accessory breast was 10 years and maximum was 35 years, maximum number (12 or 54.54%) of patients belonging to 21 to 30 years age group. [Table-1] Common clinical complaint was swelling in axillary region 22 (100 %) [Table -2]. Among these patients, 21 (95.45 %) were females. Only one (4.54%) patient was male. Bilateral swelling was in seen in eight (36.36 %) cases. Clinically, lipoma was most common provisional diagnosis in eight (36.36%) cases [Table -3]. Among the cases, four (18.18%) cases were diagnosed as fibro adenoma in accessory breast, two cases were diagnosed by FNAC and four by histopathology. Among the histopathology diagnosed cases in two cases FNAC

Table 1: Age group of patients diagnosed with accessory breast

Age group (years)	Number	Percentage
≤ 10	1	4.5
11-20	5	22.72
21-30	12	54.54
31-40	4	18.18
Total	22	100

Table 2: Clinical symptoms of patients diagnosed with accessory breast

Clinical Symptom	Number	Percentage
Swelling / Lump	22	100
Mobile	22	100
Soft consistency	18	81.81
Tenderness	10	45.45
Bilateral swelling	8	36.36
Pain	5	22.72
Leaking milk	1	4.54

was done along with histopathology. Along with accessory breast in one (4.54%) case tuberculosis, one with microfilaria and in one case fibrocystic disease was diagnosed respectively.

DISCUSSION

The human breast consists of glandular tissue surrounded by thoracic fascia and held in place by cooper ligaments. The mammary ridge regresses over the following months, with the exception of paired tissue on the anterior chest, which forms normal, pectoral breasts. Failure of this regression may result in supernumerary breast. "Supernumerary breast may present in axilla, chest wall and vulva."¹¹ Axillary breast tissue is type of ectopic breast with having a percentage of two to six in female population.⁵ The axilla is the most common site involved for ectopic breast tissue. This study also justifies this because we have also diagnosed 22 cases of accessory breast in axilla. [Figure 1]

Ectopic breast tissue comes on notice during in puberty, pregnancy, or lactation. Most commonly ectopic tissue presents during puberty though the age of presentation may vary.^{12,13} This is true because most of our cases were also belonging to pubertal age [Figure 2].

When nipple and areola are absent, the diagnosis becomes more difficult. In present study no cases were with nipple and areola. Fine needle aspiration cytology is a significant tool. If Ectopic breast is related to some pathology, fine needle aspiration is significant. But biopsy is only gold standard investigation.^{14,15} At present, primary diagnosis was made by FNAC in all 19 cases and biopsy was done in five cases. The only reason behind that was; only those patients came to hospital for surgery, so less number of biopsy.

Axillary masses are much more common in children than breast tumors. Although most axillary

Table 3: Clinical diagnosis of the patients diagnosed with accessory breast

Clinical diagnosis	Number	Percentage	Pathological diagnosis
Lipoma	8	36.36	Accessory breast
Axillary swelling	7	31.81	
Lymph adenopathy	4	18.18	
Sebaceous cyst	2	9.09	
Neuro fibroma	1	4.54	
Total	22	100	

masses are due to lymph node enlargement secondary to infection. Lipoma, vascular malformations, lymphoma are also seen. In present study youngest patient diagnosed with accessory breast in axilla was of 10 years [Table 1]. Borsook J16 who also has reported ectopic breast in 10 years female.

Accessory breast tissue may be asymptomatic or may present as swelling, pain, tenderness.¹⁷ In present study swelling/lump in axillary region was common 22(100%) followed by mobility of lump 22 (100%), not fixed to the underlined tissue [Table 2]. Commonly accessory breast are bilateral.¹⁸ In this study bilateral axillary swelling was seen in eight (36.36%). Axillary breast are common in women.^{4,5} Our result also favors this because in present study 21 (95.45 %) patients were female.

Aberrant breast tissue may mimic as a lipomatous swelling, lymph node enlargement, or sebaceous cyst.^{9,18} In present study lipoma eight (36.18%) was most common probable diagnosis of axillary accessory breast [Table 3]. Ectopic breast may undergo benign and malignant pathology.¹⁸ In this, no case of carcinoma was seen with accessory breast. Increasing number of pathologies in supernumerary breast are being reported.

Among the two cases with accessory breast one case was diagnosed with microfilaria [Figure -3] and tuberculosis in other. Tuberculosis in axilla is rare specially when occurs with accessory breast. It may be a case of secondary tuberculosis of the breast or more rarely true primary tuberculosis of the breast. Fibroadenoma is an often breast tumor of young age. Nodule is present in 20 to 30 years of age women. Here in this study four cases of fibroadenoma were diagnosed [Figure 4], belonging to 21 to 30 years of age group and one case of fibrocystic disease.

CONCLUSION

Accessory breast is common entity especially during puberty and usually presents with swelling axilla. Ectopic breast though seen in axillary region but clinically it may mimic lipomatous swelling, lymphoid enlargement and sebaceous cyst. Every axillary swelling must be examined because it may be accessory breast. FNAC and histopathological examination is required for the confirmatory diagnosis of axillary EBT so as to provide early diagnosis before the complications rises.

REFERENCES

- Moore KL, Persaud TVN. The integumentary system. In: Moore KL, Persaud TVN, editor. *The Developing Human: Clinically Oriented Embryology*. Textbook of Embryology. Philadelphia, PA: W.B. Saunders Co; 1998 .p.513-30.
- Pfeifer JD, Barr RJ, Wick MR. Ectopic breast tissue and breast-like sweat gland metaplasias: an overlapping spectrum of lesions. *J Cutan Pathol*. 1999;26:190-6. DOI: 10.1111/j.1600-0560.1999.tb01827.x. PMID:10335896.
- Velanovich V. Ectopic breast tissue, supernumerary breasts and supernumerary nipples. *South Med J*. 1995;88 :903-906. DOI: 10.1097/00007611-199509000-00002 PMID:7660204.
- Dixon JM, Mansel RE. ABC of breast diseases. Congenital problems and aberrations of normal development and involution. *BMJ*. 1994;309:797-800. DOI: 10.1136/bmj.309.6957.797
- Coras B, Landthaler M, Hofstaedter F, Meisel C, Hohenleutner U. Fibroadenoma of the axilla. *Dermatol Surg*. 2005; 31:1152-4. DOI: 10.1111/j.1524-4725.2005.31915. PMID:16164869.
- Munehisa S, Nobuyuki K, Morio S, Taizo T, Takeshi T, Shoji O. Fibroadenoma of the axillary accessory breast diagnostic value of dynamic magnetic resonance imaging. *Jpn J Radiol*. 2010;28:613-7. DOI: 10.1007/s11604-010-0466-5 PMID:20972862.
- Lakkawar NJ, Maran G, Srinivasan S, Rangaswamy T. Accessory breast tissue in the axilla in a puerperal woman – case study. *AMM*. 2010;49(4):45-7.
- Burdick AE, Thoma L L, Bambao C, Rasty G, Bandarchi B, Shier M. Benign Ductal Hyperplasia and Adenosis of Mammary-Like Glands of the Vulva. *Journal of Lower Genital Tract Disease*. 2008;12(1):32-4. DOI: 10.1097/LGT.0b013e31806bf02a PMID:18162810.
- Ghosn SH, Khatri kA, Bhawan J. Bilateral aberrant axillary breast tissue mimicking lipomas a report of a case and review of the literature. *J Cutan Pathol*. 2007;34(Suppl 1):9-13. DOI: 10.1111/j.1600-0560.2006.00713.x. PMID:17997730.
- Kanitakis J. Mammary and extramammary Paget's disease. *J Eur Acad Dermatol Venereol*. 2007; 21(5): 581-90. DOI: 10.1111/j.1468-3083.2007.02154.x.
- Bambao C, Rasty G, Bandarchi B, Shier M. Benign Ductal Hyperplasia and Adenosis of Mammary-Like Glands of the Vulva. *Journal of Lower Genital Tract Disease* 2008; 12(1):32-4. DOI: 10.1097/LGT.0b013e31806bf02a. PMID:18162810.
- Solanki R , Choksi D , Duttary D. Accessory breast tissue presenting as a large pendulous mass in axilla a diagnostic dilemma . 2008, 121(1277):76-78. PMID:18677333.
- Kim HS, Cha ES, Kim HH, Yoo JY. Spectrum of sonographic findings in superficial breast masses. *J Ultrasound med*. 2005;24(5):663-80. PMID:15840798.
- Mukhopadhyay M, Saha AK, Sarkar, A. fibroadenoma of the ectopic breast of the axilla. *Indian J Surg*. 2010;72:143-5. DOI: 10.1007/s12262-010-0024-5 PMID:23133228.
- Rajkumar B, Anbarasu S, Rajagopal L. Bilateral fibroadenoma of the ectopic breast tissue in axilla: *Int J Med Sci Public Health*. 2015;4:138-41. DOI: 10.5455/ijmsph.2015.020920144.
- Borsook J , Thorner P , Grant R , langer J .Juvenile fibroadenoma arising in ectopic breast tissue presenting as a axillary mass . *J of pediatric surgery case reports*. 2013 : 359-61. DOI: 10.1016/j.epsc.2013.09.009.
- Down S, Barr L, Baildam D, Bundred N. Management of accessory breast tissue in the axilla. *Br J Surg*. 2003;90:1213-4. DOI: 10.1002/bjs.4225 PMID:14515288.
- Dalal S , Nityasha , Dahiya R , Kant K . Spontaneous milk fistula from an accessory breast. An annoy complication. The internet journey of surgery. [Internet]. 2009 Jul [cited 2016 Apr 20];18(2). Available from: <http://ispub.com/IJS/18/2/10314>.

19. Odike MA, Orakwe JC, Oguejiofor OC, Odenigbo UC, Onyiaorah IV. Axillary fibroadenoma mimicking lymphadenopathy. Niger J Clin Pract. 2008;11(1):73-4.
20. Ciralik H, Bulbuloglu e, Arican O, Cital R. Fibroadenoma of the ectopic breast of the axilla—a case report Pol J Pathol. 2006;57(4):209 -11. PMID:17285765.