

Histopathological Study of Benign Epithelial Lesions of Breast



Medical Science

KEYWORDS : Benign epithelial breast lesion, Fibroadenoma, adenosis

Dr. Shakuntala R. Prajapati

2nd year pathology resident Pathology Department, Civil Hospital Ahmedabad.

Dr. Khyati K. Patel

2nd year pathology resident Pathology Department, Civil Hospital Ahmedabad.

Dr. Meeta Nanavati

Associate Professor, Pathology Department, Civil Hospital Ahmedabad.

ABSTRACT

Introduction: Benign breast lesions deserve attention because of high prevalence and impact on women's life and due to cancerous potential of some histological types.

Objective: The aim of this study is to establish the significance of histopathology in the diagnosis of benign epithelial breast lesions and to find out the frequency of each type of lesion in different age groups.

Method: The biopsy material for histopathological examination was collected from department of surgery of our institution during april 2014 to september 2014. Total 80 cases were studied. A detail clinical history was taken.

Result: Out of 80 cases 22 cases (27.5%) has Adenosis with cystic change, 18 case (22.5%) has Epithelial hyperplasia, 03 cases (3.75%) has Intraductal papilloma, 31 cases (38.7%) has Fibroadenoma, 6 cases (7.5%) has Adenoma.

Conclusion: Based on morphological distribution, Fibroadenoma constitute max. number of cases followed by Adenosis with cystic change. Fibrocystic disease are more common in older age group (31-45 years) whereas Fibroadenoma are more common in younger age group (16-30 years).

❖ INTRODUCTION

- The epithelium of the breast may undergo a wide variety of benign physiological alteration with age which usually do not occur uniformly throughout the tissue. As a result of such changes various clinical abnormalities are produced.
- Benign breast lesions deserve attention because of their high prevalence, their impact on women's life and due to cancerous potential of some histological types.
- But benign breast lesions are often difficult to distinguish clinically from malignant lesions and therefore frequently require diagnostic biopsy.
- The mammary gland develop in the embryo from an invagination of the superficial ectoderm which form elementary duct in the connective tissue.
- Lobule formation occurs after menarche and increases with age up to about 25 years. (1,2)
- The breast has two main types of tissue: glandular and stromal tissue.
- The glandular part includes lobules and ducts. Both are lined by inner secretory epithelial cells and outer myoepithelial cells.
- Hormones and growth factors act on stromal and epithelial cells to regulate the developmental maturation and differentiation of mammary gland cells.
- In adult breast, cyclical changes occur during the menstrual cycle that result in an increased rate of cell proliferation during luteal phase but complete differentiation with maximum development of lobular tissue takes place only through pregnancy and lactation.
- At menopause, the total numbers of lobules diminishes.
- Benign breast disease constitute a heterogeneous group of disorders including developmental abnormality, epithelial and stromal proliferation, inflammatory lesions and neoplasm.

❖ CLASSIFICATION

❖ Histopathological classification (3,4)

1. Nonproliferative breast changes (fibrocystic changes).
2. Proliferative breast changes without atypia.
3. Proliferative breast changes with atypia.

❖ FIBROADENOMA

- Usually a disease of early reproductive life, with peak incidence between the age of 20-35 years.

- Vary in size from microscopic to several inches across.
- Macroscopically, a well circumscribed, firm mass and the cut surface appears solid greyish white with a whorl-like pattern and slit like spaces.
- Microscopically consist of a proliferation of intra lobular stroma surrounds, pushes and distorts associated epithelium.

❖ FIBROCYSTIC DISEASE

- Fibrocystic disease of the breast is an extremely important lesion because of its high frequency, ability of some of its sub-types to simulate clinical, radiographic, gross and microscopic appearance of carcinoma.
- Basic morphologic changes includes cystic change, apocrine metaplasia, fibrosis, calcification, chronic inflammation and epithelial hyperplasia.

❖ ADENOSIS

- Proliferative lesion
- Increased in number or size of glandular component
- Mostly involving lobular units
- Types of adenosis (5)
 1. sclerosing adenosis
 2. Microglandular adenosis
 3. Apocrine (adenomyoepithelial) adenosis

❖ EPITHELIAL HYPERPLASIA

- It is the most common form of proliferative breast disease without atypia.
- It is define by the presence of more than two cell layers.
- Types
 1. Ductal lesions
 - A. simple ductal hyperplasia
 - B. atypical ductal hyperplasia
 2. Lobular lesions

❖ ADENOMA

- Adenoma is pure epithelial neoplasm of the breast characterised by benign overgrowth of milk duct or lobules.
- It is classified in to
 - lactating
 - tubular
 - apocrine

- ductal
- pleomorphic

❖ **AIMS AND OBJECTIVES**

- The aim of this study is to establish the significance of histopathology in the diagnosis of benign epithelial breast lesions and to find out the frequency of each type of lesion in different age groups.

❖ **MATERIALS AND METHODS**

- The biopsy material for histopathological examination was collected from department of surgery of our institution during april 2014 to september 2014. Total no. of 80 cases were study. A detail clinical history was taken.

❖ **OBSERVATIONS AND RESULT**

- A total of 80 cases were studied.
- All the patients studied were female.

❖ **Morphological distribution of cases(according to histopathological diagnosis).**

Histopathological diagnosis	No. of cases	Percentage%
Adenosis with cystic change	22	27.5
Epithelial hyperplasia	18	22.5
Intraductal papilloma/papillomatosis	03	3.75
fibroadenoma	31	38.7
Adenoma	06	7.5
Total	80	

- Fibroadenoma was the commonest histological lesion seen(38.7%) followed by Adenosis with cystic change(27.5%).

❖ **The age distribution of the cases studied was as given below.**

Age (in years)	No. of cases	Percentage%
16-20	05	6.25
21-30	37	46.2
31-40	28	35.0
41-50	10	12.5
Total	80	

- In the present study youngest patient is 16years old and oldest is 49 years old.
- Largest no. of cases (46.25%) are in 21-30 years age group, that is third decade.

❖ **Morphological distribution of cases according to age.**

Age group	Fibrocystic disease	Fibroadenoma
16-20	01	4
21-30	12	25
31-40	26	2
41-50	10	-
Total	49	31

- Fibrocystic disease are more common in older age group (31-40years) whereas,
- Fibroadenoma more commonly occurred in younger age group

(21-30years).

❖ **DISCUSSION**

- The data obtained in the present study was compared with data obtained by other workers.
- Morphological distribution of cases in present study and other study.

Histopathological diagnosis	Present study%	Cole and Elwood%
Adenosis with cystic change	27.5	25.4
Epithelial hyperplasia	22.5	29.2
Intraductal papilloma	3.75	2.2
Fibroadenoma	38.7	32.8
Adenoma	7.5	10.1

- In the present study, maximum number of cases are Fibroadenoma. This is comparable to study by Cole and Elwood.{6}
- However this is followed by Adenosis with cystic changes but Epithelial hyperplasia constitute the second highest number of cases in Cole and Elwood study.

❖ **Age distribution in present study and other study.**

Age group	Present study	Cole and Elwood study(6)
10-20	6.2	1.9
21-30	46.2	39
31-40	35	24.8
41-50	12.5	34

- Above two studies shows maximum number of patients are in 21-30 years age group.

❖ **CONCLUSION**

- Based on morphological distribution, Fibroadenoma constitute maximum number of cases followed by Adenosis with cystic change.
- Fibrocystic disease are more common in older age group(31-45 years) whereas Fibroadenoma are more common in younger age group(16-30 years).
- In benign epithelial breast lesions, biopsy and histological study constitute one of the most important investigation to prove a definitive diagnosis and to rule out any possibility of malignancy in any breast lump.

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