World Journal of Pharmaceutical Sciences
ISSN (Print): 2321-3310; ISSN (Online): 2321-3086
Published by Atom and Cell Publishers
Available online at: http://www.wjpsonline.org/
Original Article

Spectrum of breast lesions in young females

Dr R. Sudhakar [1], Dr G. Raja Pramila [2]

[1] MD (Pathology) Assistant Prof of Pathology and [2] MD (Pathology) Associate Prof of Pathology. Gemsh Medical College, Ragolu, Srikakulam, Andhra Pradesh, India

Received: 27-11-2015 / Revised: 15-12-2015 / Accepted: 30-12-2015

ABSTRACT

The aim of the study is to analyze 1 Type of lesion, 2 Gross and microscopic pathology, 3 Age incidence of various lesions, 4 Special reference to malignancies. The breast biopsy samples of all patients below 40 years were received and studied in department of pathology. This study consists of 340 cases reported from 1st January 2010 to 31st December 2015. The spectrum of breast lesions is complex at the same time interesting in that malignancy can effect younger females also. In young females benign proliferative disease is common with fibroadenoma being the commonest. In our series one case of malignancy was diagnosed below the age of 20 years. This study emphasizes the need for keen observation of morphological variations in benign proliferative lesions so that such lesions which have potential for malignant transformation can be followed up further.

Key words: Breast lesions, Young females

INTRODUCTION

Breast masses especially in young age group are a source of anxiety for patients as the less to the surgeon, because of the risk of cancer and potential cosmetic discomfort following surgery [1] .A look at the western and Indian literature shows that studies on breast masses are mainly devoted to cancer breast in adults and these donot seperately recognize the problem of breast disease in young females. Thus evaluation of breast lesions in this age group remains a challenge. In India breast cancer forms the commonest malignancy after cervical cancer in females and is detected in 20 per 1,00,000 women. However there are more benign breast lesions than malignant breast lesions [2].

Objective: This study is designed to know the spectrum of breast lesions in young females less than 40 years of age in patients attending Teritiary care Hospital in Srikakulam, Andhra Pradesh. The aim of the study is to analyze 1 Type of lesion, 2 Gross and microscopic pathology, 3 Age incidence of various lesions, 4 Special reference to malignancies

MATERIAL AND METHODS

The breast biopsy samples of all patients below 40 years were received and studied in department of pathology. This study consists of 340 cases reported from 1st January 2010 to 31st December 2015. The present study consists of 340 cases referred to department of Pathology during the period from the 1st January 2010 to 31st December 2015. The specimen included incisional biopsy, Lumpectomy and Mastectomy specimens of young females less than 40 years of age. They were cut transversely and fixed in 10% formalin for 24 hours. Thorough sampling is done and bits given from representative areas. Processing is done in automatic tissue processor, sections are stained by H and E and studied under routine light microscope. All the data was collected and tabulated as per their histological types including benign and malignant and their percentages.

RESULTS AND OBSERVATIONS

Among the 340 cases inflammatory lesions were 10 (3%), benign breast lesions were 282 (82.9%) and malignant lesions were 48 (14.1%). Fibroadenoma is the most common benign lesion with peak incidence between 21 to 30 years. Invasive ductal carcinoma NOS is the most common malignant lesion. Malignant lesions have in the age group 31 to 40 years in young females. Among the entire breast lesions in young females benign proliferative lesions were common accounting for 82.9%.

***Corresponding Author Address:** Dr R. Sudhakar, MD (Pathology) Assistant Prof of Pathology. Gemsh Medical College, Ragolu, Srikakulam, Andhra Pradesh, India*

Table: 1. Spectrum of breast lesions in young females.

Type	No of cases	Percentage
Inflammatory	10	3%
Benign proliferative Disease	282	82.9%
Malignant	48	14.1%

Table: 2. Age distribution in relation to the histologic type of breast lesions in young females.

Histologic Type	<10	11-20	21-30	31-40	Total	%
Fibroadenoma	2	74	96	33	205	60.3%
Fibrocystic Dis.	-	4	11	16	31	9.1%
Adenosis	-	2	21	4	27	7.9%
Adenoma	-	-	9	-	9	2.6%
Phylloides	-	2	2	6	10	2.9%
TB Mastitis	-	-	-	1	1	0.3%
Galactocele	-	-	3	-	3	0.9%
Fat necrosis	-	-	-	1	1	0.3%
Abscess	-	2	3	-	5	1.5%
Carcinoma	-	1	9	38	48	14.1%
Total	2	85	154	99	340	100%
Percentage	*0.6%*	*25%*	*45.3%*	*29.1%*	*100%*	*100%*

Fibroadenoma is the commonest histological type accounting for 60.3% of all the lesions and it shows peak in the age group of 21-30 years. The same age group is effected with more commonly of breast lesions also accounting for 45.3%. Epitheliosis was observed in 12 cases out of 31 cases of fibrocystic disease. Calcification is observed in 2 cases. Sclerosing adenosis is the most common type of adenosis observed and one case of radial scar was also seen. Lactating adenoma is common and observed in the age group of 21 to 30 years. Inflammatory lesions were found more commonly in the age group of 21-30 years accounting for 3.8% lesions in that age group. Malignant lesions accounted for 14.1% of all lesions. Most common histological type of malignancy is invasive ductal carcinoma NOS followed by schirrous carcinoma. Nodal metastasis were observed in 41.6% of malignant cases. Breast carcinoma is more commonly seen in the age group of 31-40 years accounting for 11.7% of all the cases. Histologically invasive ductal carcinoma not otherwise specified is commoner followed by scirrhous carcinoma.

Table: 3. Age distribution in relation to malignant lesions.

Histologic Type	<10	11-20	21-30	31-40	Total
DCIS	-	1	-	-	1
IDC-NOS	-	-	9	19	28
MEDULLARY	-	-	-	5	5
SCIRRHOUS	-	-	-	11	11
COLLOID	-	-	-	2	2
POORLY DIF	-	-	-	1	1
Total	-	1 (02%)	9 (2.6%)	38 (11.7%)	48 (14.1%)

Table: 4. Incidence of metastases in malignant breast lesions.

Total malignant cases	Nodal metastases	Percentage
48	20 (31-40 years age group only)	41.6%

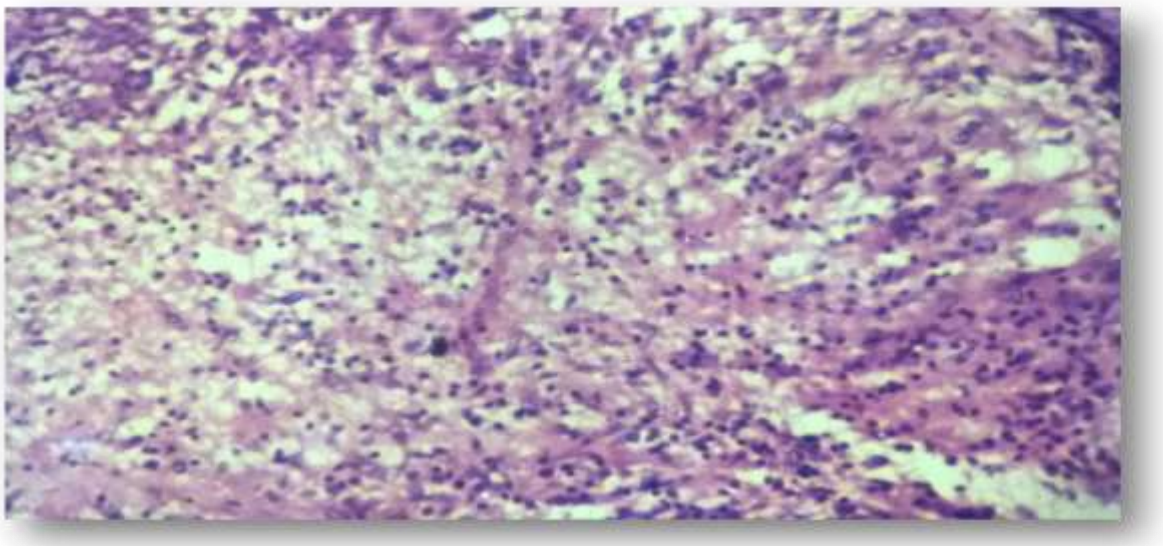
Nodal metastases were observed in 41.6% of malignant cases.

DISCUSSION

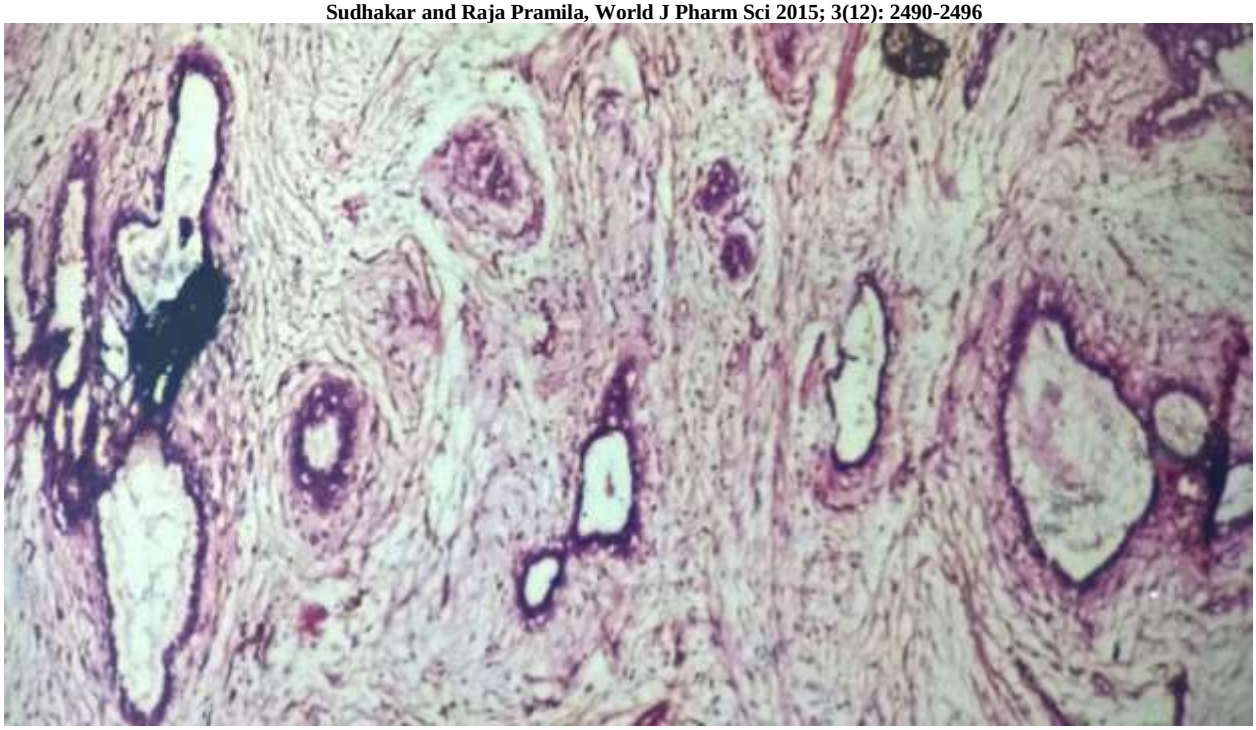
The present study reveals that in the first decade of life breast lesions are extremely rare and only 2 out of 340 presented with breast lesions in this age group. Both of them were fibroadenomas and the earliest is seen at 8years age.The rarity of breast disease in the first decade of life is reported by stone AM et al, Seltzer MH and Skiles MS and Ferguson CM and Powell RW also [3][4][5]. Stone et al reported that 2.8% of breast lumps in women less than 20 years were inflammatory. The present study correlated with this study with 2.3% inflammatory lesions up to age of 20 years. We observed a case of tuberculous mastitis, 3 cases of galactoceles and a case of fat necrosis. Stone et al reported 71.1% of lumps as fibroadenoma and kulkarni et al the incidence to be 62.32%. The present study correlated with that of stone et al. The peak incidence of fibroadenoma in the present series is between 21 to 30 years and that of fibrocystic disease is about a decade after that [Table2]. It is speculated that fibroadenomas are the outcome of an exaggerated hormonal response whereas fibrocystic disease is a retrogressive change and proliferative activity in it indicate abnormal hormonal status. Sclerosing adenosis is one of the common clinical and histological diagnosis often made and likely to be misdiagnosed as scirrhous carcinoma by the beginner. In out study there are 22 cases of sclerosing adenosis and the peak incidence is between 21 – 30 years. This tallies with the findings of Rahul Khanna, Suseela Khanna and Sunanda Chaturvedi [1]. The incidence of fibrocystic disease in young females is 9.1% in the present series as compared to 6.2% of stone et al, 10.3% of Rahul Khanna et al and 11.3% Kulakarni Sangeetha et al [2].The importance of many benign lesions lies in their ability to mimic cancer and not all benign lesions are completely free of risks. inflammatory lesions in the breast are of clinical significance because of their potential for confusing them with cancer [6]. The reported incidence of breast malignancy in females upto 40 years of age from India is 35.8% by Pal and Sen Gupta from Calcutta [7], 47.3% by Nair et al from Delhi [8], 30% by Sharma and Singh form Raipur [9], 37.1% by Hai and Verma form Bihar [10] and 40% by Nagpal and Singh form Punjab [11]. It is apparent form the above data that the incidence of breast cancer is higher in young females in India in comparison to reports from the West.In the present study the incidence of malignancy is only 14.1% possibly due to regional variation and smaller sample volume of the study. The peak incidence of malignancy in our study is 31-40 years age group and 41.6% of the patients with Nodal Metastases [Table 4]. Rahul Khanna et al noted 31.6% Nodal Metastases in their study. This probably shows the lack of awareness about the breast cancer among the people of the region, so that they presented late when Metastases have developed.

CONCLUSION

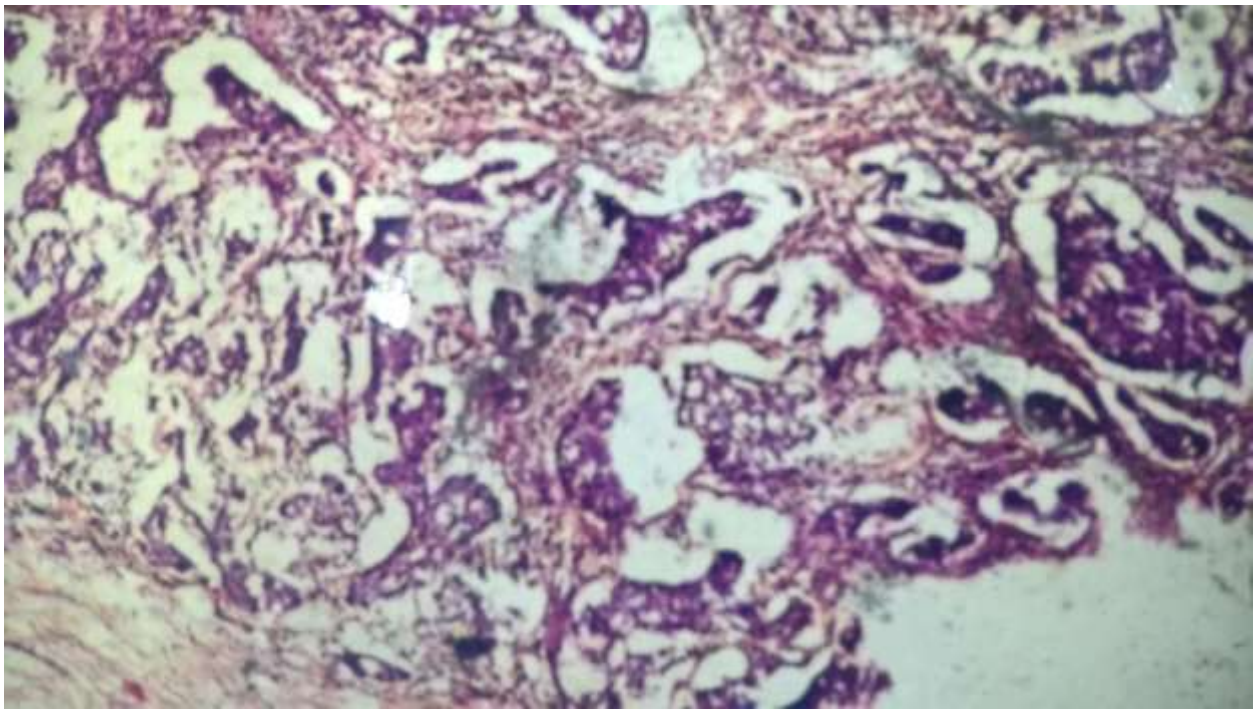
The spectrum of breast lesions is complex at the same time interesting in that malignancy can effect younger females also. In young females benign proliferative disease is common with fibroadenoma being the commonest. In our series one case of malignancy was diagnosed below the age of 20 years. This study emphasizes the need for keen observation of morphological variations in benign proliferative lesions so that such lesions which have potential for malignant transformation can be followed up further.



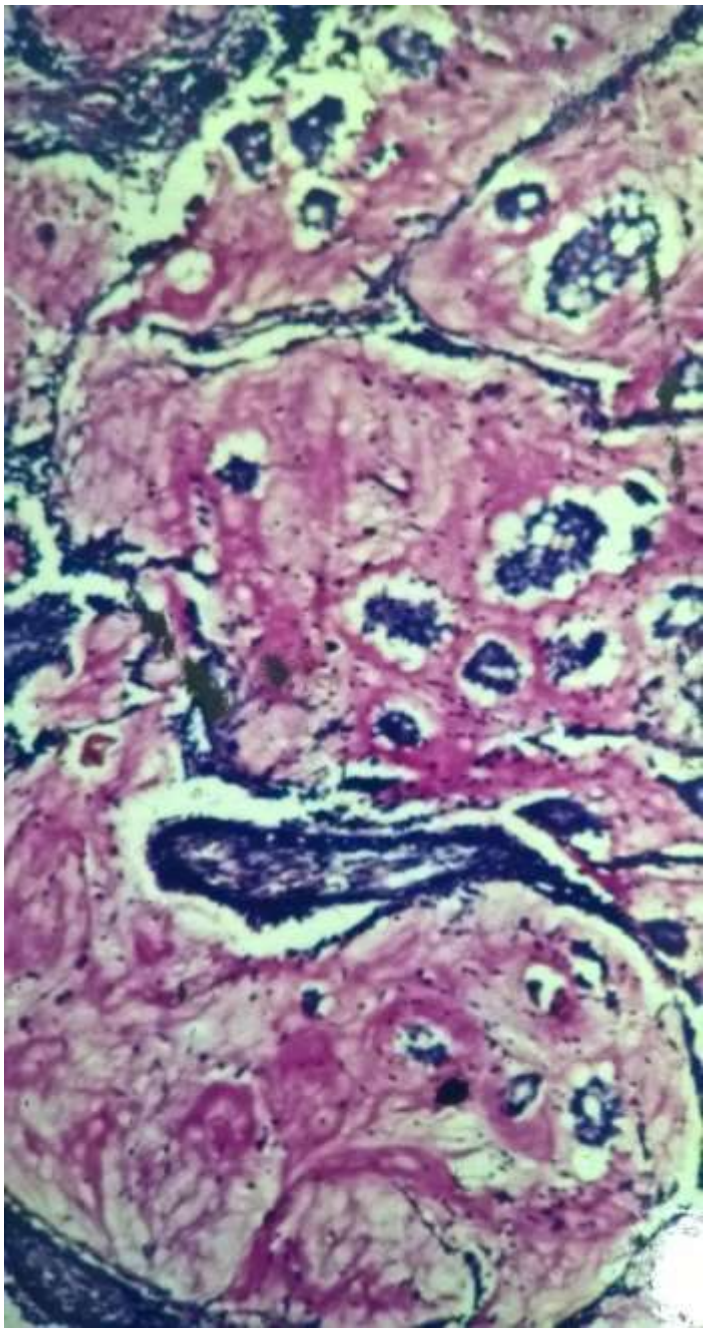
Tuberculosis Mastitis



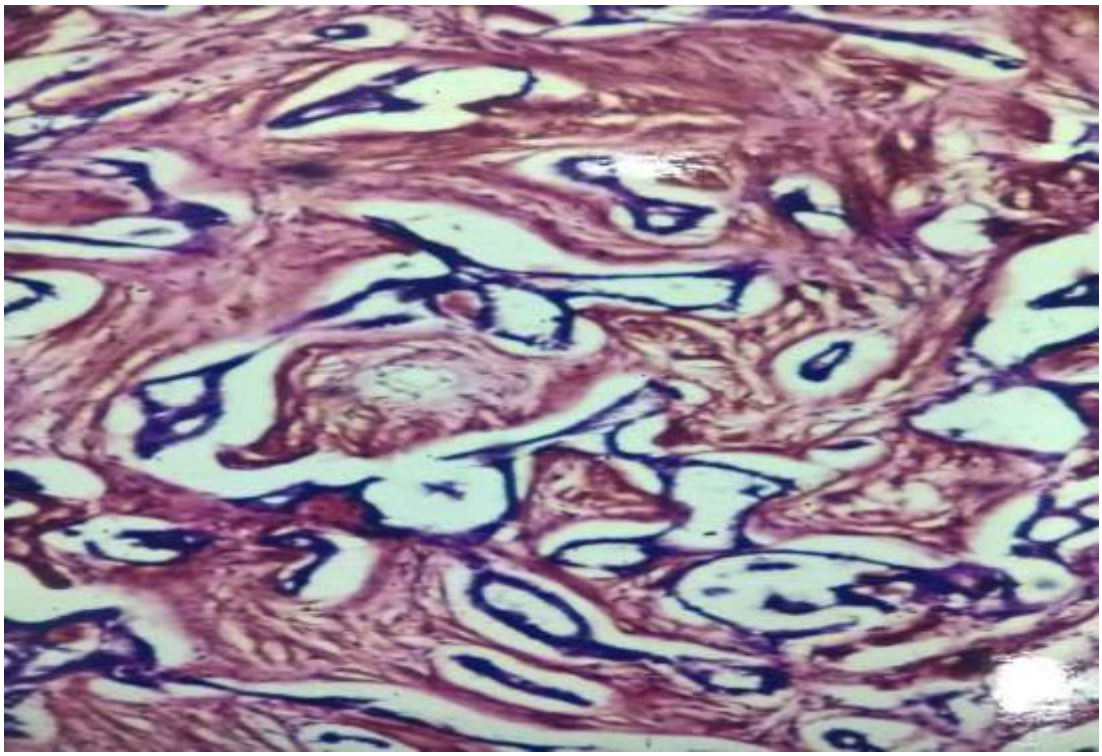
Calcification in Fibroadenoma



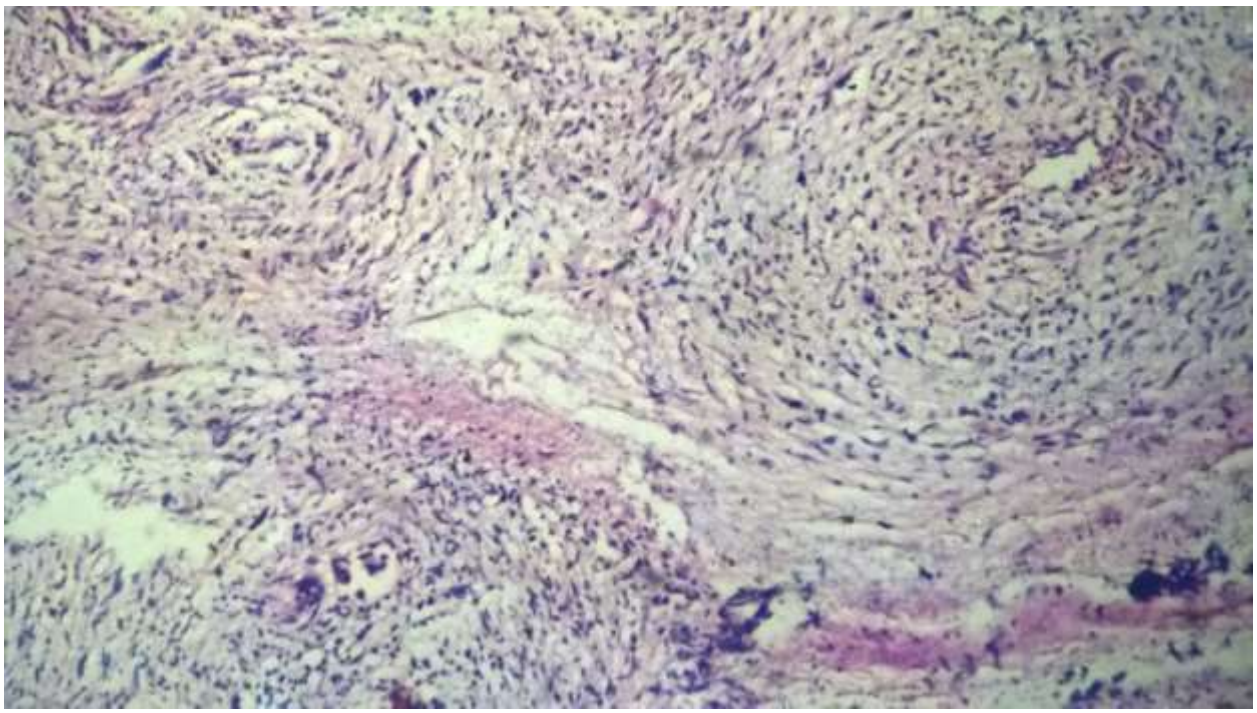
Medullary Carcinoma



Colloid Carcinoma



Tubular Carcinoma



Malignant Phylloides Tumor

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