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Histopathological Spectrum of Thyroid Lesions: A Study of 100 Cases.

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Abstract: *The diseases of thyroid are of great importance since most are amenable to medical or surgical management Knowledge of spectrum of thyroid disorders will help in planning for appropriate treatment.. The present study was conducted on 100 cases of thyroid excision/biopsy referred to the Department of Pathology, Government Medical College, Patiala from Rajindra Hospital, Patiala. The patients were taken from all age groups. Out of 100 cases of thyroid specimens on histopathology; 91 cases turned out to be benign, while 9 cases turned out to be malignant on histopathology. Out of non neoplastic lesions the most common lesion was adenomatous goiter. Out of neoplastic lesions Follicular adenoma was most common in the present study. The most common histological type of thyroid cancer observed was Papillary carcinoma in the present study.*

Keywords: *Thyroid swellings, histopathology*

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I. Introduction

Thyroid swellings are one of the most common problems encountered in clinical practice. The name 'thyroid' is derived from the Greek description of a shield shaped gland in the anterior neck 'Thyreoides'[1].The diseases of thyroid are of great importance since most are amenable to medical or surgical management[2]. Enlargement of thyroid gland called goitre is the most common manifestation of thyroid disease[3]. Thyroid surgery is indicated in patients with both malignant and indeterminate/suspicious FNAC[15]. Knowledge of spectrum of thyroid disorders will help in planning for appropriate treatment.

II. Material And Methods

The present study was conducted on 100 cases of thyroid excision/biopsy referred to the Department of Pathology, Government Medical College, Patiala from Rajindra Hospital, Patiala between the time period of August 2006 to November 2008. The patients were taken from all age groups. The sample was fixed in 10% formalin. Sections were stained with routine haematoxylin and eosin stain. Special stains were performed wherever required

III. Observations

Out of 100 cases of thyroid specimens on histopathology; 91 cases turned out to be benign, while 9 cases turned out to be malignant on histopathology. Thus benign lesions were almost 10 times that of malignant lesions in the present study in histological specimens.

Table 1 showing age and sex wise distribution of benign lesions on histopathology (n=91)

Age	Female	%age	Male	%age	Total	%age
0-10	0	0	2	2.19	2	2.19
11-20	6	6.59	1	1.09	7	7.69
21-30	19	2.08	1	1.09	20	21.97
31-40	28	30.7	2	2.19	30	32.96
41-50	14	15.3	5	5.49	19	20.87
51-60	9	9.89	2	2.19	11	12.08
61-70	1	1.09	1	1.09	2	2.19
>71	0	0	0	0	0	0
Total	77	84.6	14	15.4	91	100

Male : Female = 1:5.5

Table 2 showing age & sex wise distribution of malignant lesions on histopathology (n=9)

Age	Female	%age	Male	%age	Total	%age
0-10	0	0	0	0	0	0
11-20	0	0	0	0	0	0
21-30	2	22.2	0	0	2	22.2
31-40	1	11.2	0	0	1	11.2
41-50	2	22.2	2	22.2	4	44.4
51-60	2	22.2	0	0	2	22.2
61-70	0	0	0	0	0	0
>70	0	0	0	0	0	0
Total	7	77.8	2	22.2	9	100

Male : Female = 1:3.5

Table 3 showing histopathological pattern in 100 cases in the present study

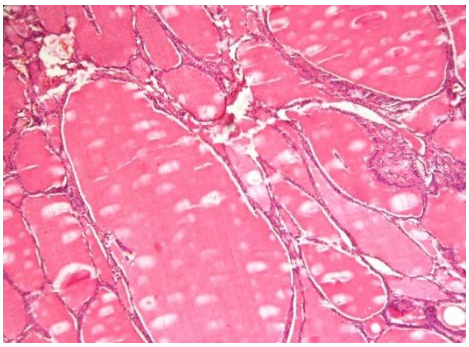
Category	No. of Cases	%age
Benign	91	91%
Malignant	9	9%
Total	100	100%

Table 4 showing histopathological pattern in benign lesions (n=91) in the present study

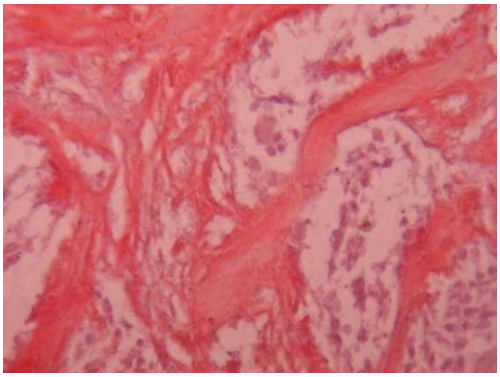
S. No.	Category	No. of Cases	%age (out of benign)	%age of total (100)
1	Adenomatous goitre	48	52.70	48.00
2	Adenoma	23	25.20	23.00
3	Cystic degeneration in adenomatous goiter	8	8.79	8.00
4	Hashimoto's thyroiditis	5	5.49	5.00
5	Lymphocytic thyroiditis	3	3.29	3.00
6	Thyroglossal cysts	4	4.39	4.00
	Total	91	100.0	91.0

Table 5 showing histopathological pattern in malignant lesions (n=9) in the present study

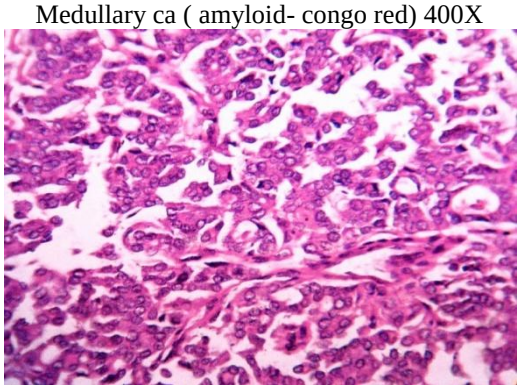
S. No.	Category	No. of Cases	%age (out of malignant)	%age of total (100)
1	Papillary carcinoma thyroid	5	55.60	5.00
2	Follicular carcinoma thyroid	2	22.20	2.00
3	Medullary carcinoma thyroid	2	22.20	2.00
	Total	9	100.0	9.00



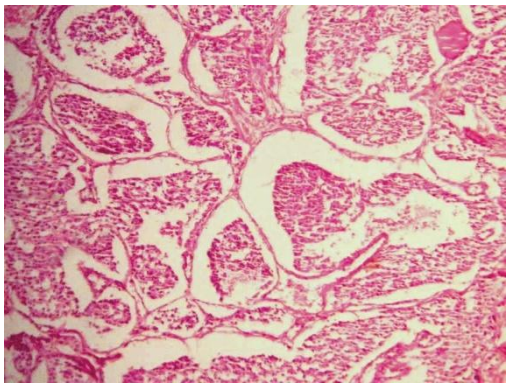
Adenomatous goiter 400x



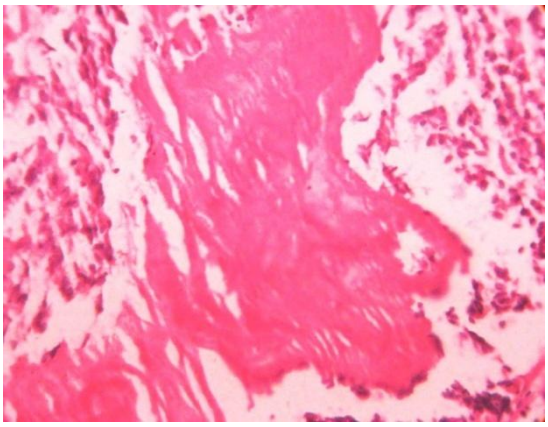
Medullary ca (amyloid- congo red) 400X



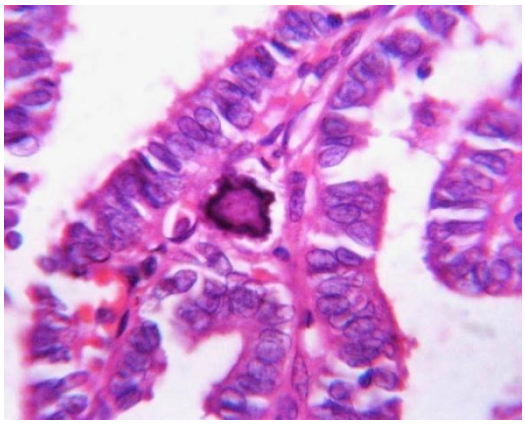
Papillary ca (400x)



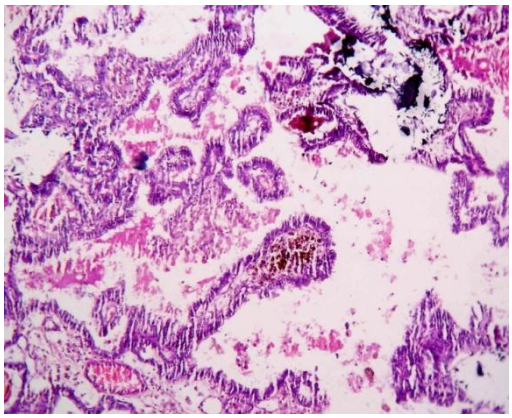
Medullary ca (400x)



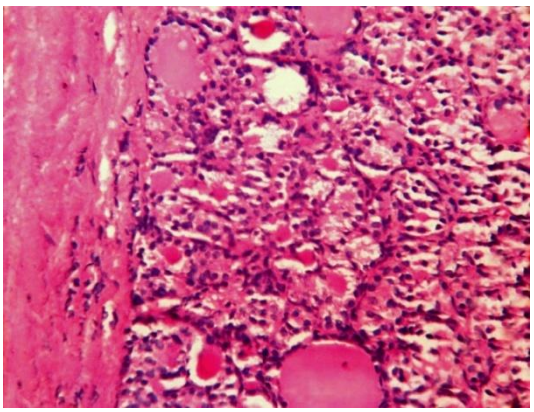
Amyloid in medullary ca (H&E)



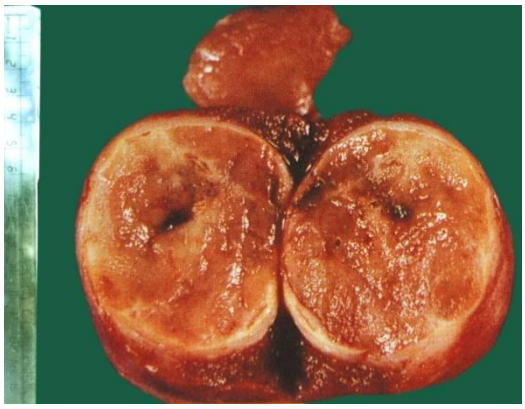
Psammomabody



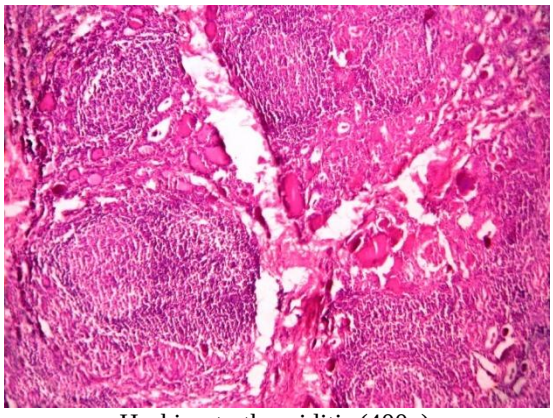
Papillary ca(400x)



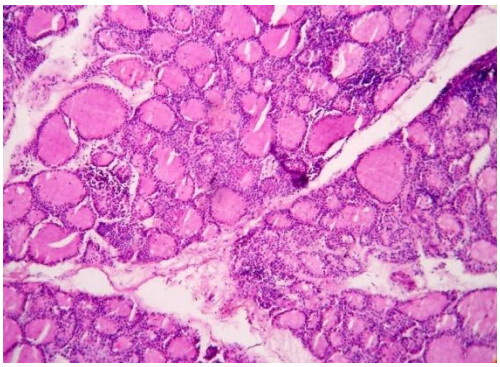
Follicular adenoma (400x)



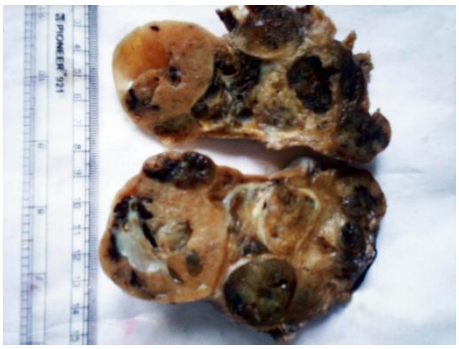
Follicular adenoma



Hashimoto thyroiditis (400x)



Adenomatousgoitre(400x)



Adenomatous goitre

IV. Discussion

In 100 cases the average age of patient in the present study was 38.4 years, the average age for benign and malignant lesions was 37.2 years and 42.7 years respectively. Decade wise, after histopathological confirmation, the commonest age group for benign lesions was 31-40 years and commonest age group for malignant lesions was 41-50 years in the present study. Hall et al [4]reported an overall average age of 45.1 years in their study on 795 cases of thyroid lesions. Sirpal et al [5] in his study on thyroid lesions, observed an average age of 35.03 years. Mazeh et al [6] reported an average age of 46 years in their study on 242 cases of thyroid lesions. . Abdulkader Albasri et al[7] observed an average age of 39 years in their study on 292 thyroidectomy specimens. Most of the patients were females in the present study (almost five and half times that of males). Mandrekar et al [8]also reported similar ratio in their study on 238 cases of various thyroid lesions. They observed male to female ratio in the tune of 1 : 6.1. Mazeh et al [6] also reported similar ratio in their study on 242 cases of various thyroid lesions. They observed male : female ratio in the tune of 1:5.2. Abdulkader Albasri et al[7] observed male female ratio of 1: 3.7 in their study on 292 thyroidectomy specimens. Shalini Raje Singh etal[9] also reported Goitre as most common non neoplastic lesion on histopathology in their study.d Similar findings were observed in a stody conducted by Priya P Kartha etal[10]. Vprabha etal[11] also observed adenomatous goiter to be the most common bebign non neoplastic lesion in their study .Out of neoplastic lesions Follicular adenoma was most common in the present study. Similar observations were reported by Mazeh etal[6]: Priya P kartha [l0] and M Padmavath et al[12] in their respective studies. It was also reported to be the most common carcinoma in thyroidectomy specimens in studies conducted by Abdulkader Albasri et al[7]; by Priya P Kartha [eta10l]; Vprabha etal[11] and Shalini Raje Singh et al[9] .

Follicular carcinoma and Medullary Carcinoma were relatively lesser observed in the present study. The findinds correspond with the studies conducted by Shalini Raje Singh etal[9] and Nzegwe etal[13] .

V. Summary And Conclusions

The present study was conducted on100 cases of thyroid excision /bio[psy specimens referred to the Department of Pathology, Government Medical college, Patiala from Rajindra Hospital, Patiala as well as adjoining private institutions . The average age of patient in the present study was 38.4 years. The observed male : female ratio was in the tune of 1:5.5. In the present study the incidence of thyroid malignanacy was 9%. Out of non neoplastic lesions the most common lesion was adenomatous goiter Out of neoplastic lesions Follicular adenoma was most common in the present study. The most common histological type of thyroid cancer observed was Papillary carcinoma in the present study. Follicular carcinoma and Medullary Carcinoma were observed with relatively lesser frequency in the present study.

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