Carcinoma of thyroid – clinical presentation and outcome

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Summary

The clinical, biochemical and pathological features of 31 patients with thyroid carcinoma managed at Hospital Universiti Sains Malaysia, Kubang Kerian from 1985 to 1989 were analyzed. There were 25 females and 6 males. The types of carcinoma were: papillary – 17 cases; follicular – 10 cases; medullary – 2 cases and anaplastic – 2 cases. For papillary carcinoma the mean age of the patients was 52.9 years. For follicular carcinoma the mean age was 48.3 years, for medullary carcinoma, 48.5 years and for anaplastic, 74.5 years. All patients had pre-existing goitre except for 2 and most presented with advanced disease. The mean duration of symptoms for papillary carcinoma was 3.7 years, follicular carcinoma 1.6 years, medullary carcinoma 13.5 years and anaplastic carcinoma 6 months. 12 patients presented with goitre of increasing size; 9 had compression symptoms; 4 presented with cervical lymph node enlargement and 6 presented with bony pains of whom 2 had paraplegia. None of the patients were ever thyrotoxic or hypothyroid. Treatment in general was unsatisfactory because of patients' non-acceptance of surgery and/or radioactive iodine.

Key words: Thyroid carcinoma, Clinical features.

Introduction

Thyroid carcinoma is an uncommon malignancy.[1,2] In Malaysia, carcinoma of the thyroid is recorded under other cancers. Thus, there is a major problem in determining the exact incidence of thyroid cancer in this country. In Singapore, the annual incidence is 0.9 and 3.2 per 100,000 for males and females respectively.[3] In most series, papillary carcinoma is the commonest histological type, followed by follicular carcinoma. As for treatment, there is still some controversy in the various modalities used.[4,5] Most agree that thyroidectomy is the initial choice of treatment but the controversial point is the extent of the surgery.[2,6,7] Radioiodine is often used either as adjuvant therapy.[2,8,9] or as the primary treatment in patients with disseminated disease, but its efficacy, especially as adjuvant therapy, has been questioned[10]. As information on thyroid carcinoma in this country is scarce, this paper seeks to present and share the experience of this disease in Kelantan.

Materials and Methods

Records of 31 consecutive patients with carcinoma of thyroid managed in this hospital from January 1985 to December 1989 were reviewed. The diagnoses of thyroid cancer were based on histology of

tissues obtained by either fine needle aspiration biopsy, lymph node biopsy, biopsy of bony metastases or thyroid gland specimens.

Results

Of the 31 cases, 35 (80%) were females and 6 (20%) were males. The female to male ratio was 4.2:1. Twenty-nine of the patients were Malays and 2 were Chinese. The histological types of thyroid carcinoma are shown in Table 1. As in other series papillary carcinoma was the commonest histological type. One patient had papillary carcinoma of the thyroglossal duct cyst. Table II shows the mean age for the different types of carcinoma. The highest incidence of thyroid cancer was in the 5th and 6th decades. The youngest patient was 11 years and the oldest, 85 years of age. The majority of the patients with papillary carcinoma were in the 5th and 6th decades. The youngest in this study had follicular carcinoma. Those with anaplastic carcinoma were in the 8th decade.

Table I
Distribution of cases by histopathological classification and sex distribution

Histological type	Male	Female	Number	%
Papillary	4	13	17	57
Follicular	0	10	10	31
Medullary	1	1	2	6
Anaplastic	1	1	2	6

Table II
Mean age of patients with thyroid cancer

Type	Mean Age	Range
Papillary	52.9 years	24 – 80 years
Follicular	48.3 years	11 – 85 years
Medullary	49.5 years	46 – 51 years
Anaplastic	74.5 years	70 – 78 years

Forty percent of the patients presented with a neck swelling of increasing size. Twenty-nine percent had compression symptoms of dysphagia, dyspnoea and hoarseness of voice. Six patients had bone pain and swelling on presentation, of whom 2 had paraplegia with collapse compression of the thoracic vertebrae. Osteolytic lesions were caused by these secondary deposits but there was no particular predilection to any bone. All these patients had follicular carcinoma. Four patients had cervical lymph node enlargement on presentation, 3 of whom were diagnosed to have papillary carcinoma and one had medullary carcinoma. The majority (93.5%), had a pre-existing goitre most of which were multinodular. Only 2 patients had no goitre, one of whom had papillary carcinoma and the other follicular carcinoma (Table III). The shortest duration of the pre-existing goitre was one month and the longest was more than 20 years. Both the patients with anaplastic carcinoma had a short duration of symptoms of 5–6 months (Table IV). None of these patients were ever thyrotoxic. The mean ± s.d) values of total thyroxine was 106 ± 38 nmol/l, triiodothyroxin was 1.6 ± 0.5 nmol/l and thyrotrophin (TSH) was 2.1 ± 1.7 IU/L.

Table III
Presenting Symptoms

Symptoms	Number of Cases	%
Neck swelling	12	40
Compression symptoms	9	29
Lymph nodes	4	12
Distant metastases (bone)	6	19

The main sites of metastases of papillary carcinoma were the lymph nodes (regional) whilst follicular carcinoma had a predilection for bones. Both the patients with anaplastic carcinoma had no evidence of metastases at the time of presentation (Table V).

Surgery was done in 74% of cases. Only 19% went for radioactive iodine therapy subsequently (Table VII). One patient with papillary carcinoma and metastasis to liver and lung who had refused surgery was given chemotherapy. Both cases of anaplastic carcinoma and one patient with papillary carcinoma refused all form of treatment. All patients were put on L-thyroxine. Of the patients who had thyroidectomy and radioactive iodine, one patient with papillary carcinoma presented a year later with cervical lymph nodes metastasis. Another patient with follicular carcinoma presented with bony secondaries. One patient with papillary carcinoma who had thyroidectomy but refused radioactive iodine had secondaries to cervical lymph node and multiple cranial nerve involvement.

Only 7 patients (6 papillary, 1 follicular) were on regular follow up. The longest follow up period was 5 years and the shortest was one year, with the median follow up period of 3 years.

Discussion

The predominance of Malays in our study is not unexpected because out of a total number of 58,310 patients coming to our outpatients departments in 1989, 53,677 were Malays, 3,750 Chinese, 636 Indians and 247 others. As in other studies elsewhere, papillary carcinoma was the commonest

histological subgroup followed by follicular carcinoma.[3,11] Both the cases of medullary carcinoma had no evidence of multiple endocrine neoplasia. However no family screening was done.

In several studies, thyroid carcinoma was more common in the younger age group.[1,10,11] In our series it was found to be more common in the 5th and 6th decades. In a study done in Singapore the peak incidence of thyroid carcinoma was in the 3rd decade of life but they noted that there was a rising incidence with age.[3]

In both studies there was a female preponderance with 2.4 : 1 ratio in theirs and 4:1 in ours. Five percent of patients in the Singapore study had associated thyrotoxicosis whereas none of ours had. Most of our patients had a long standing pre-existing goitre. Those with nodal spread were predominantly papillary carcinoma. Of the 10 cases of follicular carcinoma 6 had distant metastases – all to the bone. Twenty-five patients had surgery of one form or other but only 8 agreed to go for radioiodine. Of this 8, 2 had recurrence with metastasis. There was a high dropout rate with only 7 on follow up.

In summary, most of our patients presented with long standing goitre or advanced disease with secondaries. Treatment in general was sub-optimal because of social and cultural unacceptance of surgery and/or radioactive iodine.

Table IV
Duration of symptoms

Type	Mean duration	Range
Papillary	3.7 years	1 mth – 15 years
Follicular	1.6 years	1 mth – 4 years
Medullary	13.5 years	7 – 20 years
Anaplastic	5.5 months	5 – 6 months

Table V
Sites of metastases

Type	Node	Bone	Liver Lung
Papillary	7	2	1
Follicular	0	6	0
Medullary	1	0	0
Anaplastic	0	0	0

Table VI
Investigative Modalities

Diagnosis	No
Thyroidectomy specimen	6
Fine needle aspiration	7
Histology after excision of thyroid nodule	4
Lymph Node biopsy	4
Bone biopsy	5
*Others	1

1 patient had an incidental discovery of malignancy following excision of a thyroglossal cyst. 4 cases were already diagnosed to have thyroid cancer at other centres before coming to us.

Table VII
Treatment

Type	Modalities of treatment	
	Surgery	Surgery + Radioiodine
Papillary	8	6
Follicular	7	2
Medullary	2	–
Anaplastic	–	–

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