Araştırma Makalesi (Research Article)

Yaşlı Erkeklerde Malign Tiroid Hastalıklarının Genel Özellikleri

General Characteristics of Malignant Thyroid Disorders in Elderly Men

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Özet

Amaç: Tiroidektomi uygulanan yaşlı erkek hastalarda malignite oranlarını ve sonuçlarını araştırmayı amaçladık.

Gereç ve Yöntemler: Kadın hastalar çalışma dışı bırakıldı. Çalışmaya dahil edilen erkek hastalar iki gruba ayrıldı; Grup 1, 60 yaş altı ve grup 2, 60 yaş üstü. Histopatolojik sonuçlara göre hastalar benign ve malign olarak sınıflandırıldı. Malign olanların tümör büyüklüğü her grupta birbiriyle karşılaştırıldı. Ayrıca malign grupta tümörün histolojik alt tipi ve çok odaklı olması kaydedildi. Tüm hastaların demografik parametreleri ve patolojik bulguları kaydedildi. İstatiksel olarak p değeri <0.05 olması anlamlı kabul edildi.

Bulgular: Çalışmaya dahil edilen toplam hasta 727(%20) idi. Grup 1 tüm vakaların %82.3›ünü (n=598), grup 2 ise tüm vakaların %17.7›sini (n=129) oluşturuyordu. Malign hastaların ortanca yaşı grup 1›de 46 yıl, grup 2›de 67 yıl idi. Histopatolojik sonuçlarda malignite oranı; Grup 1'de 100 hasta (%16.7), grup 2'de 27(%20.9) hasta malign olarak bulunmuştur. Ortalama tümör çapı grup 1›de 16.3 mm ve grup 2›de 20.3 mm idi. Birden fazla odak olması, grup 2'de 12 (%44.4) hastada ve grup 1'de 26 (%26) hastada mevcuttu.

Sonuç: Çalışmamızda yaşlı erkeklerde; tiroid kanseri, tümör boyutu ve birden fazla odak olma oranı genç hastalara göre daha yüksek tespit edilmemiştir. Bu durum tiroid hastalarının multidisipliner takibininin bir sonucudur.

Anahtar kelimeler: Tiroid, Kanser, Yaşlı erkek

Abstract

Objective: We aimed to investigate malignancy rates and outcomes in elderly male patients undergoing thyroidectomy.

Material and Methods: Female patients were excluded from the study. Male patients included in the study were divided into two groups; Group 1 is under 60 years and group 2 is over 60 years. According to histopathological results, patients were classified as benign and malignant.Also in malignant group; histological subtype of the tumor and tumor focality- multicentriticy were investigated and multicencritic ones were noted. The demographic parameters and pathological findings of all patients were recorded. Statistically, p value <0.05 was considered significant.

Results: A total of 727 (%20) male patients included in the study. Group 1 was accounted for 82.3% (n=598) and group 2 was accounted for 17.7%(n=129) of all cases. The median age of malignant patients was 46 years in group 1 and was 67 years in group 2. The histological subtype; group 1 was malignant in 100 (16.7%) cases and group 2 was malignant in 27 (20.9%) cases. The average tumor diameter was 16.3 mm in group 1 and 20.3 mm in group 2. The multicenticity was present in 12 (44.4%) cases of group 2 and in 26 (26%) cases of group 1.

Conclusion:I n our study in advanced age male patients; There was no significant increase in thyroid cancer incidence, tumor size and multicentre ratio from young patients. This is a result of multidisciplinary follow-up of thyroid patients.

Keywords: Thyroid, Cancer, Elderly men

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INTRODUCTION

The thyroid gland is an important endocrine organ which settled between the deep fascias ofthe neck. Hormones produced from the thyroid gland have an important role in different functions of the body (1). Like the other organs of the body, thyroid gland has familial, hereditary and sporadic diseases. The incidence of these diseases increases with age. Surgeons consider the malignant tumors as the most important diseases of thyroid gland(2).

Nowadays thyroid surgery is performing especially for malignancy. Thyroid cancer is the ninth most common cancer and accounts for 3.8% of all new cancer cases in the United States (3).

Like all the other cancers, there are lots of parameters that determine the prognosis of thyroid cancer. The principal prognostic factors are age, histologic type of cancer, histologic grade, extrathyroidal extension, vessel invasion, lymphatic invasion, perineural invasion, tumor size, regional lymph node involvement and distant metastasis (4-7).

In our study, we aimed to investigate the rates and consequences of malignancy in elder men who underwent thyroidectomy.

MATERIAL and METHODS

We retrospectively analyzed the data of 3632 patients who underwent thyroidectomy between January 2010 and December 2018 in Abant Izzet Baysal University Hospital, Department of General Surgery. The study was planned according to the principles of the Helsinki Declaration. This work has been approved by the institutional directorate (no/date: 33443051-929/15.10.2019). Female patients, recurrent thyroid surgeries, those who underwent thyroid surgery in adolescent period, and the patients who underwent lobectomy were excluded from the study. Male patients were divided into two groups; under the age of 60 as Group 1 and 60 years and elder as group 2. According to histopathological results, patients were classified as benign and malignant. The patients were evaluated in terms of demographic data, being in the benign or malignant group, being single or multicentriticy.

Statistical Analysis: SPSS 15.0 was used for statistical evaluation. The conformity of the data to normal distribution was done with the kolmogorow-Smirnow or Shapiro Wilk test. Student t-test or Mann Whitney U Test in the evaluation of numerical data according to its normal distribution. x^2 analysis was done to evaluate categorical data. Numerical data were given as mean ± standard deviation (minimum-maximum) values or median (minimum-maximum values or 25th and 75th percentile) according to their suitability for normal distribution. Categorical data are given as number (n) (percent /%). $p < 0.05$ others were considered statistically significant.

RESULTS

A total of 727 (%20) male patients included in the study. Gender ratio in all patients male/female; It was determined as 1/5. Group 1 was accounted for 82.3% (n=598) and group 2 was accounted for 17.7%(n=129) of the included cases. The mean age of group 1 was 45 (19-59) and of group 2 was 66 (60-78) (p=0.001).

The histological subtype of group 1 was benign in 498 (83.3%) cases; and was malignant in 100(16.7%) cases; and the subtypeof group 2 was benign in 102 (79.1%) cases; and was malignant in 27 (20.9%) cases. The median age of malignant patients was 46 (17-59) in group 1 and was 67 (60-78) in group 2 **(Table 1)**.

According to histopathological evaluation, no significant difference was observed between group 1 and group 2 in terms of malignant patients (p=0.25).

When we looked at the the histological tumor type in group 1;the tumor was papillary carcinoma in 94 (94%) , medullary carcinoma in 3 (3%), undiferantiated (anaplastic) carcinoma in 2 (2%) and oncocytic (hürtle cell) carcinoma in 1 (1%) case. In group 2 the histological tumor type was papillary carcinoma in 24 (88.9%) , undiferantiated (anaplastic) carcinoma in 2 (7.4%) and follicular carcinoma in 1 (3.7%) case. The histological subtype differences was not significant between the groups 1 and 2 (p=0.15).

In group 1 the tumor was multicentric in 26 (26%) cases and unicentric in 74(74%) cases. The multicentricity was present in 12 (44.4%) and absent in 15(55.6%) of group 2 cases. Multicentricity rate was not statistically significant (p=0.06) **(Table 1)**.

The median tumor diameter was 16.3 (1-65) mm in group 1 and 20.3 (2-70) mm in group 2. The tumor size was nota statistically significant (p=0.52) **(Table 1)**.

Table 1. Demographic and histopathological results

		Group 1	Group 2	p
Overall average age		45	66	0.001
Median age in malignant cases		46	67	0.02
Histopathological results	**Benign(n)**	498	102	0.254
	Malignant(n)	100	27	
Multicentricity	**Yes(n)**	26	12	0.06
	No(n)	74	15	
Median tumor diameter (mm)		16.3	20.3	0.52

DISCUSSION

Aging is a physiological process of the body. The human body continues his or her life with increased risk of different diseases with aging. One of the frequent disease of elderly people is goiter, which means the enlargement of thyroid gland. In recent years, with the development in radiological imaging systems and development and succeeding consequences of the tissue sampling with biopsy brougth, the long term follow up of the patients with goiter without surgery (8).

Although the thyroid diseases are less common in male, the follow up and treatment algorithm is similar with female patients. In our study male/female rate was 1/5 and it could clearly seen that advanced aged male patients could have been operated till the age of 78.

Surgeons conclude that the cancer isthe most important disease of the thyroid gland. Thyroid cancer is the only cancer for which age is included in the American Joint Committee on Cancer TNM staging system (9-11). Although typically it has a favorable prognosis, the aggressiveness of thyroid cancer increases with aging (12,13).There is also a recognized association between elder age and the poor outcomes (13,14). In our study, there was no significant difference in cancer rates in elderly patients.

Thyroid cancer is still the most common malignancy of the endocrine organs. On the other hand it has much better prognosis than other cancers. Also the most common histological subtype is still papillary carcinoma with a rate of 80% in all tyhroid cancers (15). In our study the most common histological subtype was papillary carcinoma (88.9%) and it is similar with the literature.

Thyroid cancer sometimes occur in more than one area in the thyroid gland which named as multicentricity. Benek et al. investigated the rate of multicentritis in all thyroid patients and found that the rate of multicentricity was 26% (13). In our study the multicentricity rate was 29.9% in male patients which was reaching 44.4% with advanced age.

Unfortunately the insidance of thyroid cancers increasing year by year, but, fortunately tumors can be detected early in small sizes. So the insidance of detection of smaller tumors especially less than 2 cm is increased(16). In this situation tumor size is gaining importance as a prognostic factor.

In developed countries, the rate of the tumors which are smaller than 1 cm, is 40% in patients who underwent surgery for thyroid cancer (17). In our study average tumor diameter was 16mm in younger male patients the but the diameter reaches 20mm in older men.

In 21th century we can see that the treatment and follow up algorithms of the thyroid diseases developing so patients being followed up without surgery for years. In our study in advanced age male patients; There was no significant increase in thyroid cancer incidence, tumor size and multicentre ratio from young patients.

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Research Contribution Rate Statement Summary: The authors declare that, they have contributed equally to the manuscript.

REFERENCES

1. Gan T, Randle RW. The Role of Surgery in Autoimmune Conditions of the Thyroid. Surg Clin North Am. 2019;99(4):633-648.
2. Zahedi A, Bondaz L, Rajaraman M, Leslie WD, Jefford C, Young JE, et al. Risk for Thyroid Cancer Recurrence Is Higher in Men Than in Women Independent of Disease Stage at Presentation. Thyroid. 2020;30(6):871-877.
3. Nguyen QT, Lee EJ, Huang MG, Park YI, Khullar A, Plodkowski RA. Diagnosis and treatment of patients with thyroid cancer. Am Health Drug Benefits. 2015;8(1):30-40.
4. Hay ID, Grant CS, Taylor WF, McConahey WM. Ipsilateral lobectomy versus bilateral lobar resection in papillary thyroid carcinoma: a retrospective analysis of surgical outcome using a novel prognostic scoring system. Surgery. 1987;102(6):1088-1095.
5. Cady B, Rossi R. An expanded view of risk-group definition in differentiated thyroid carcinoma. Surgery. 1988;104(6):947-953.
6. Byrd D, Compton C. Cancer staging manual.In: Edge SB editor American Joint Committee on Cancer. New York: Springer; 2010. p.97-100.
7. Degroot LJ, Kaplan EL, Mccormıck M, Straus FH. Natural history, treatment, and course of papillary thyroid carcinoma. J Clin Endocrinol Metab. 1990;71(2):414-424.
8. Chaker L, Cappola AR, Mooijaart SP, Peeters RP. Clinical aspects of thyroid function during ageing. Lancet Diabetes Endocrinol. 2018;6(9):733-742.
9. Haymart MR. Understanding the relationship between age and thyroid cancer. The oncologist. 2009;14(3):216-221.
10. Sosa JA, Udelsman R. Total thyroidectomy for differentiated thyroid cancer. J Surg Oncol. 2006;94(8):701-707.
11. Dean DS, Hay ID. Prognostic indicators in differentiated thyroid carcinoma. Cancer control. 2000;7(3):229-239.
12. Papaleontiou M, Haymart MR. Approach to and treatment of thyroid disorders in the elderly. Med Clin North Am. 2012;96(2):297-310.
13. Nammas W, Mostafa M, Sabry I, Abdel-Aziz M, Kabil H.Thyroid hormone patterns in elderly patients undergoing elective coronary procedures. Eur Rev Med Pharmacol Sci. 2011;15(2):175-180.
14. Christmas C, Makary MA, Burton JR. Medical considerations in older surgicalpatients. J Am Coll Surg. 2006;203(5):746-751.
15. Fassnacht M, Kreissl MC, Weismann D, Allolio B. New targets and therapeutic approaches for endocrine malignancies. Pharmacol Ther. 2009;123(1):117-141.
16. Morris LG, Sikora AG, Tosteson TD, Davies L. The increasing incidence of thyroid cancer: the influence of access to care. Thyroid. 2013;23(7):885-891.
17. Milas Z, Shin J, Milas M. New guidelines for the management of thyroid nodules and differentiated thyroid cancer. Minerva Endocrinol. 2011;36(1):53-70.