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Boyunda Kitle Şikayeti ile Başvuran Hastaların Histopatolojik Analizi: 1002 Vaka

Histopathological Analysis of The Patients who Applied with A Cervical Mass Complaint: 1002 Cases

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ÖZ

GİRİŞ ve AMAÇ: *Bu çalışmanın amacı; Dicle Üniversitesi Tıp Fakültesi KBB kliniğinde boyun kitlesi nedeniyle takip edilmiş ve cerrahi uygulanmış olan hastaların tanısal dağılımını saptamaktır.*

YÖNTEM ve GEREÇLER: *Dicle Üniversitesi Tıp Fakültesi Kulak Burun Boğaz anabilim dalında, 2006-2011 yılları arasında boyun kitlesi nedeniyle takip edilmiş olan ve tanı/tedavi amacıyla cerrahi uygulanmış 1002 olgunun (406 kadın/596 erkek)patolojik raporları yaş, cinsiyet ve histopatolojik tanı bulguları not edilerek retrospektif olarak incelendi.*

BULGULAR: *Boyun kitlelerinin 425'i (%42) enflamatuar, 242'si (%24) malign neoplastik, 229'u (%23) benign neoplastik, 106'sı (%11) konjenital orjinli idi. Yaş ortalaması enflamatuar kitlelerde 37.6 ± 14.1, konjenital kitlelerde ise 14.7 ± 6.8 idi. Benign kitleli hastalarda yaş ortalamsı 41.8 ± 10.3 iken malign kitleli hastalarda yaş ortalaması 54.5 ± 15.9 idi.*

TARTIŞMA ve SONUÇ: *Yurdumuzda boyun kitleli hastalarda enflamatuar nedenler en sık sebep olarak karşımıza çıkmaktadır. Çalışmamızdaki sonuçlarda bu bilgiyi desteklemektedir. Fakat bu gruptaki bazı hastalıkların insidansında farklılıklar gözlenmiştir.*

Anahtar Kelimeler: *Boyun kitlesi, Cerrahi Tedavi, Histopatolojik Tanı*

ABSTRACT

INTRODUCTION: *The aim of this study was to investigate the relationship between left ventricular diastolic functions and coenzyme Q10 levels in coronary artery disease (CAD) patients with preserved left ventricular systolic functions.*

METHODS: *A total of 64 patients aged between 20 and 86 years, in whom coronary angiography were performed and documented significant CAD, were included in the study between July and October 2009. The patients were classified into two groups based on the presence and absence Left ventricular diastolic dysfunction (LVDD).*

RESULTS: *A total of 64 significant CAD patients were included in the study, of whom 42 (65.6%) were male. The mean age was 60.5±12.1 years. The mean plasma coenzyme Q10 level in all patients was 1408.2±346.5 µg/L. The groups were compared for coenzyme Q10 levels, which were found to be 1516.0±381.0 µg/L in the presence of LVDD (+) and 1285.7±472.6 µg/L in the absence of LVDD group (p =0.08).*

DISCUSSION and CONCLUSION: *A significant relationship was not observed between LVDD and coenzyme Q10 levels in the presence of significant CAD with preserved systolic functions.*

Keywords: *Neck Masses, Surgical Treatment, Histopathologic Diagnosis*

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INTRODUCTION

The neck is an anatomically complicated region because it forms a bridge between the head and the body and contains many vital structures constrained in a tight space. The neck anatomy is quite complex because of the neural, vascular, respiratory and digestive structures it contains. It is necessary to have a comprehensive knowledge of the neck anatomy to understand the pathophysiology of diseases in this region.

The skeleton structure of the neck is formed by the vertebral column. The front side is supported by the hyoid bone and laryngeal and tracheal cartilages. Neck inspection and palpation are very useful in determining deep anatomic structures and their interrelations. Mastoid type, thyroid and cricoid cartilage, hyoid bone, cricoid ligament, thyroid gland, carotid artery, vena jugularis externa, sternocleidomastoid muscle, trapezoid muscle, manibrium sterni and clavicle are superficially identifiable structures. Neck structures are surrounded by two fascia groups, one superficial and the other deep (1).

Rapid and accurate diagnosis established for any patient applying with neck mass complaints is directly related to the success of the treatment. Although a diagnosis can be established with a good medical history and physical examination in the majority of children and young adults, in adults, the diagnosis is usually made by mass excision despite all efforts (2).

Age is one of the important factors in the evaluation of neck masses. While the inflammatory masses are the most frequent in the 0-15 age range, these are followed by congenital masses and neoplastic structures. An important point in this group is that the majority of neoplastic structures are malignant. In young adults between 16 and 40, inflammatory masses are the most frequently observed and these are followed by congenital and neoplastic masses, respectively. Most of the neoplastic structures in this group are benign. In young adults over 40 years, the etiology of the mass is often neoplastic and malignant. This is followed by inflammatory and congenital, developmental masses, respectively (Table-1). In the anamnesis, the time of onset, the changes in size, the growth rate, the presence of pain, the recent infections, the dental problems, fever, the loss of weight, the respiratory and swallowing difficulties, the presence of hemoptysis, aphonia, alcohol use habits, previous diseases, radiotherapy, familial or past cancer stories must be questioned (3).

Table 1. Distribution of neck masses etiology according to the age

0-15 years	Inflammatory > Congenital > Neoplastic
16-40 years	Inflammatory > Congenital > Neoplastic
40 and over	Neoplastic > Inflammatory > Congenital

The multiplicity of causes leading to mass formation in the neck creates difficulties in establishing differential diagnosis. The most important issue for a patient with a neck mass is to decide if the mass is malignant. The incidence and types of neck masses are closely related to the socioeconomic status of the countries. While the most frequent cause of neck masses is infection and inflammation in developing countries, congenital and neoplastic masses predominate in the developed countries due to better hygienic conditions (4).

MATERIAL AND METHODS

Between 2006 and 2011, 1002 patients who were admitted to Dicle University Medical Faculty.

Ear, Nose and Throat Clinic with neck mass complaints and not diagnosed by routine diagnostic methods were evaluated. These patients who underwent surgery and diagnosed upon histopathological examination were evaluated retrospectively.

Pulmonary graphics, ultrasonography and, when necessary, computer-assisted tomography and magnetic resonance images were taken routinely for the cases. Then, mass excision was performed for diagnosis or treatment purpose under general or local anesthesia. The cases for whom the diagnosis was established by non-surgical methods (such as fine-needle aspiration biopsy) and who were not diagnosed clearly for various reasons (such as insufficient material) were not included in the study.

All tissue samples were examined under light microscopy and with immunohistochemical staining for some of them.

Statistical analyzes were performed using SPSS 15.0 for Windows (SPSS Inc. Chicago, USA) packet program.

RESULTS

A total of 1002 patients, 596 male and 406 female, were included in the study. The distribution of the patients according to their genders and their mean ages are shown in Table-2.

Table 2. Distribution of the patients according to their genders and their mean ages

	Number of patients	Mean age
Male	596 (%59.5)	41.1 ± 18.2
Female	406 (%40.5)	38.9 ± 15.6
Total	1002	40.2 ± 17.2

When considering the pathological diagnosis of patients' masses; inflammatory masses were detected in 42% (n = 425), neoplastic masses in 47% (n = 471) and congenital masses in 11% (n = 106) of the cases. 51.4% (n = 242) of the neoplastic masses were malignant and 48.6% (n = 229) were benign. (Table 3)

Table 3. Distribution of the patients according to the pathological diagnosis

	Male Patient	Female Patient	Total
Inflammatory	249	176	425 (%42)
Malignant Neoplastic	166	76	242 (%24)
Benign Neoplastic	122	107	229 %23)
Congenital	59	47	106 (%11)

When considering the mean age of the patients; the mean age of the patients with inflammatory masses was 37.6 ± 14.1 years, the mean age of the patients with neoplastic masses was 48.3 ± 14.9 years and the mean age of those with congenital masses was 14.7 ± 6.8. When considering the neoplastic masses; the mean age of the patients with malignant neoplastic masses was 54.5 ± 15.9 and the mean age of the patients with benign neoplastic masses was 41.8 ± 10.3. (Figure 1)

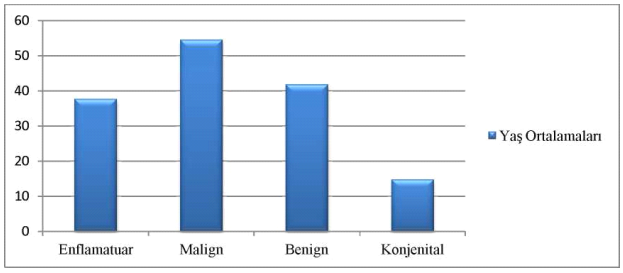

Figure 1. Distribution of mean age of the patients according to their histopathological diagnosis

The mean age of male patients with malignant neoplastic diagnosis (n = 242) was 56.8 ± 15.1 years and the mean age of female patients (n = 76) was 49.6 ± 16.5 years.

When considering the age decade distribution of the patients with malignant neoplastic masses, 5% of the patients were in the second and third decades, 15% in the fourth decade, 33% in the fifth decade, 35% in the sixth decade and 12% in the seventh decade. (Figure 2)11.4 years and the mean age of female patients (n = 122) was 42.6 ± 8.9 years.

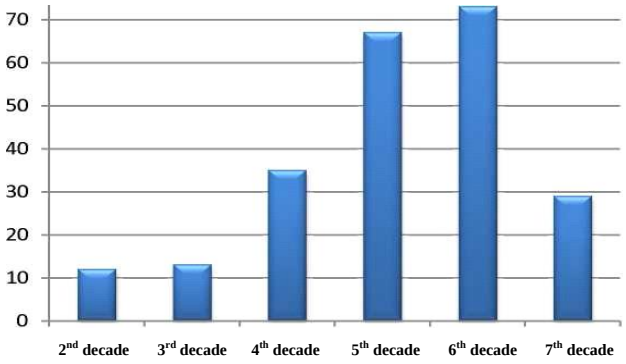

Figure 2. Age decade distribution of the patients with malignant neoplastic mass diagnosis

When considering the age decade distribution of the patients with benign neoplastic masses, 13% of the patients were in the second decade, 30% in the third decade, 30% in the fourth decade and 21% in the fifth decade. The remaining patients were in the 6th decade and above (Figure-3).

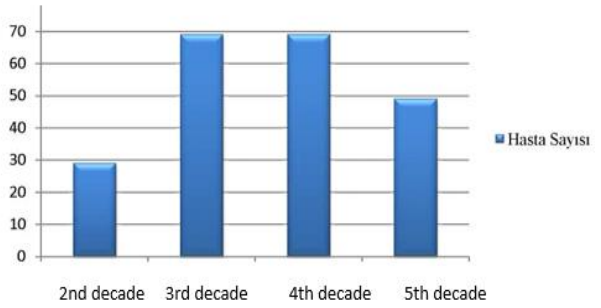

Figure 3. Age decade distribution of the patients with benign neoplastic mass diagnosis

The mean age of the male patients with inflammatory masses (n = 249) was 36.9 ± 14.8 years and the mean age of female patients (n = 176) was 38.5 ± 13.2 years.

When considering the age decade distribution of the patients with inflammatory masses, 9% of the patients were in the first decade, 18% were in the second decade, 27% in the third decade, 22% in the fourth decade, 16% in the fifth decade, 5% were in the 6th decade and 3% were in the 7th decade and above (Table-4).

Table 4. Age decade distribution of the patients with inflammatory mass diagnosis

	Number of patients	Mean age
2nd decade	40 (%9)	15.7 ± 2.7
3rd decade	76 (%18)	24.9 ± 2.6
4th decade	116 (%27)	35.1 ± 2.3
5th decade	92 (%22)	44.4 ± 2.4
6th decad	68 (%16)	54.9 ± 2.4
7th decad	20 (%5)	62.6 ± 2.8

The total mean age of the 106 patients diagnosed with congenital masses was 14.7 ± 6.8, while the mean age of male patients (n = 59) was 14.3 ± 6.1 and the mean age of female patients (n = 47) was 15.2 ± 7.6 (Table- 5).

Table 5. Distribution of the patients diagnosed with congenital mass according to their genders and their mean ages

Congenital	Number of Patients	Age
Male	59	14.3 ± 6.1
Female	47	15.2 ± 7.6

DISCUSSION

Neck masses constitute a wide spectrum of diseases. They require accurate differential diagnosis due to the diversity of their etiologies. In addition, definitive diagnosis is made by pathological examination. Metastases of inflammatory and neoplastic diseases are frequently observed in the neck due to the presence of about 2/3 of the lymphatic system present in the whole body. Moreover, during embryonal organogenesis, the organs present in the neck are composed of ectoderm, mesoderm and endoderm. Congenital neck masses are formed after birth due to embryonal residues formed during the cellular migration of these three structures (2,5).

People of all ages can apply to ear, nose and throat specialists with neck mass complaints. The demographic characteristic that should be firstly questioned in cases with neck mass is age. Because factors that play a role in the etiology of these cases vary with age. Neoplastic masses in advanced ages and inflammatory and congenital masses in children and young adults should be considered first in etiology. In our study, there were 1002 patients in total with 596 male and 406 female patients and the mean age was 40.2 ± 17.2. The mean age of male patients was 41.1 ± 18.2, and the mean age of female patients was 38.9 ± 15.6. The mean age was 37.6 ± 14.1 years for the patients with inflammatory masses, 48.3 ± 14.9 for the patients with neoplastic masses and 14.7 ± 6.8 for those with congenital masses. While, in the literature, neoplastic masses are in the first place in the distribution of neck masses in people of 40 years and over, inflammatory masses take the first place in the 16-40 age group (2,6). In our study, 331 (65%) neoplastic and 180 (35%) inflammatory masses were detected in 511 patients over 40 years of age. When considering the

16-40 age group; of the 386 patients, 218 (56.5%) were found to have inflammatory, 129 (33.5%) were found to have neoplastic and 39 (10%) were found to have congenital masses. When considering the group under 16 years; of the 105 patients, 67 (64%) were found to have congenital masses, 27 (26%) were found to have inflammatory masses and 11 (10%) were found to have neoplastic masses. These findings are consistent with the literature.

The lesions forming neck masses are roughly classified as inflammatory, congenital and neoplastic. In studies conducted, inflammatory and neoplastic masses take the first place (7).

When considering the studies performed on this issue in our country; in the study of Erdem et al. conducted in 1989 on 218 cases, inflammatory, neoplastic and congenital masses were detected respectively in 50%, 31.6% and 16.2% (8); in the study of Sütbeyaz et al. conducted in 1994 on 475 cases, inflammatory, neoplastic and congenital masses were detected respectively in 41.7%, 28.2% and 30.1% (9); in the study of Koç et al. conducted in 1995 on 330 cases, neoplastic, inflammatory, and congenital masses were detected respectively in 51.3%, 33% and 14.5% (10); in the study of Şapçı et al. conducted in 1999 on 116 cases, neoplastic, inflammatory, and congenital masses were detected respectively in 43.1%, 31% and 25.8% (6); in the study of Cıncık et al. conducted in 2003 on 408 cases, inflammatory, neoplastic and congenital masses were detected respectively in 53.7%, 28.2% and 18.1% (11); in the study of Uysal et al. conducted in 2009 on 481 cases, inflammatory, neoplastic and congenital masses were detected respectively in 47.8%, 44.5% and 9.9% (12). In the studies, the neoplastic mass frequency varies between 28-51% and the inflammatory mass frequency varies between 31-54%. In our study, neoplastic masses were observed in 47% (471) of the patients, inflammatory masses in 42% (425) of the patients and congenital masses in 11% (106) of the patients and these findings are consistent with the literature. The difference in the frequency of neoplastic or inflammatory causes in the first place in our study may be related to the difference in the number of patients in the study.

Criteria such as size of the mass, growth rate, mobility, pain, temperature increase and sensitivity should be evaluated in the differential diagnosis of neck masses, and the algorithm of radiological or laboratory examinations should be determined under clinical findings (13). When infection is considered to be the cause of the disease, microbiological and serological examinations specific to the potential microorganisms should be performed, the microorganisms causing the disease should be identified and their susceptibility to antimicrobial agents should be determined on the pathway leading to the diagnosis (2,6,12,14). Fine needle aspiration cytology (FNAC), incisional and excisional biopsies are widely used for final diagnosis (15).

The etiologic factors in neck mass differ from country to country. While the most frequent cause of neck masses in developing countries is inflammatory lesions, congenital and neoplastic masses predominate in developed countries. In studies conducted in our country, the frequency of inflammatory neck masses varies between 31% and 54%. Tuberculous lymphadenitis constitutes an important part of the inflammatory neck masses. Tuberculosis is an important health problem all over the world with its increasing incidence throughout the world and in our country. Delay in diagnosis, insufficient treatment and the emergence of resistant organisms are considered as responsible for this increase. When considering the studies conducted in our country, the frequency of tuberculous lymphadenitis was determined as; 16.4% in the study of Koç et al. (16), 14% in the study of Cincik et al. (11), 18% in the study of Yıldırım et al. (17) and 21% in the study of Uysal et al. (12). Similarly with the literature, when all patients were evaluated in our study, the tuberculous lymphadenitis frequency was determined as 18% with 184 cases. When only inflammatory masses are considered, tuberculous lymphadenitis ranks first with 43.3% , followed by inflammatory lanefadenitis with 42% and sialadenitis with 13%.

Neoplastic neck masses constitute an important disease group especially in old patient group. In literature, neoplastic neck masses ranks first in patients over 40 years (6). In the study of Uysal et al,, 203 neoplastic mass cases were detected among

481 patients and the mean age of these patients was 43.2 ± 19.4 (12). In our study, a neoplastic mass was detected in 47% of the cases with 471 patients and the mean age of these cases was 48.3 ± 14.9. This finding was consistent with the literature (2,12). Studies have shown that the majority of neoplastic masses are formed by malignant masses. In the study performed by Uysal et al., malignant neoplastic mass and benign neoplastic mass were found in 51.7% and in 49.4% of the cases respectively (12); in the study of Yıldırım et al., malignant neoplastic mass and benign neoplastic mass were found in 60.4% and in 39.6% of the cases respectively (17). In our study, 51.4% with 242 cases were found to be malignant while 48.6% with 229 cases were found to be benign among the 471 cases, similarly to the literature. The mean age of the patients with malignant masses was 54.5 ± 15.9 years, and the mean age of the patients with benign masses was 41.8 ± 10.3. According to the decade distributions, it is noteworthy that about 58% of the patients with malignant masses are in the 5th and 6th decades while 60% of the patients with benign masses are in the 3rd and 4th decades.

Neck masses are common in the pediatric age group. In the pediatric and young adult patient group, 85% of neck masses are infectious and congenital cysts and malformations. However, unlike the adult group, physical examination and radiological examinations in addition to a good patient history, accurate diagnosis may be established at a high rate (3). In children, the most frequently observed inflammatory masses caused by the frequency of upper respiratory tract infections. The most common non-inflammatory mass in children is congenital masses.

CONCLUSION

Many different factors play a role in neck mass etiology. The lesions forming neck masses are roughly classified as inflammatory, congenital, benign neoplastic and malignant neoplastic. In studies conducted, inflammatory and neoplastic masses take the first place.

In this study conducted on neck masses, inflammatory masses are in the first place. The demographic characteristic that should be firstly questioned in cases with neck mass is age. In the first two decades, congenital masses come into prominence while malignant neoplastic mass rates increase in elder people.

In our study, it was observed that the gender did not make any significant difference in the differential diagnosis of neck mass, but it is necessary to confirm the role of demographic factors in larger patient groups.

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