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Sevgili okurlarımız,

Baharın başladığı şu günlerde dergimizin ikinci sayısı ile karşınızdayız. Bu sayıda farklı alanlardan 4 makaleyi sizinle buluşturacağız.

Endobronşiyal iğne aspirasyonu, diğer geleneksel tanı teknikleriyle karşılaştırıldığında akciğer kanseri tanısında çok önemli bir yere sahiptir. Patil ve arkadaşları bu çalışmalarında endobronşiyal iğne biyopsilerinin güvenli bir yöntem olmasının yanı sıra patolojik açıdan da iyi sonuçlar verdiğini bizlerle paylaşıyorlar.

Diğer çalışmamız beslenme ve diyetetik bölümünden ve diyabetiklerde gece yeme sendromu sıklığını araştırıyor. Gece yeme sendromu günlük kalorinin yarıdan fazlasının akşam yemeğinden sonra atıştırma şeklinde alındığı bir bozukluktur. Soykan ve arkadaşları çalışmalarında diyabetik ve nondiyabetikler arasında bir farklılık olmadığını ancak beden kitle indeksine göre farklılık oluştuğunu göstermişler. İlgi ile okunacağını düşünüyoruz. Günlük pratiklerimiz içindeki uygulamaların zaman zaman derlenmesi bizlere ilerleyen dönemlerde yol gösterici olabiliyor. Örücü ve arkadaşları verilen sürücü sağlık raporlarını bu açıdan irdelemişler ve bulgularını bizlerle paylaşıyorlar. Bu araştırma makalelerinin yanı sıra bir tanede olgu sunumu bu sayımızda yer almakta. Bu olgu sunumu veterinerlik bölümünden geliyor ve bir köpekteki visseral leismanya olgusunu güncel literatür ile tartışıyor.

Keyifli okumalar diliyorum, sonbaharda görüşmek üzere…

Prof Dr Berrin Telatar
Başeditör

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Original Article

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Diagnostic Role of Bronchoscopy guided Endobronchial Needle Aspiration cytology Exophytic endobronchial lesions: A single-center study in a tertiary care setting in India

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ABSTRACT

Objective: In present study, various conventional diagnostic techniques (CDTs) such as endobronchial forcep biopsy (FB), bronchial washing (BW) and endobronchial needle aspiration cytology (EBNA) are employed during fiber-optic bronchoscopy for diagnosis of exophytic endobronchial lesions (EEL) and special emphasis is given to EBNA.

Material and method: Prospective, observational study, screened 1280 cases with suspected lung malignancy on clinical and radiological basis. Bronchoscopy guided techniques such as EBNA, BW, FB is used in exophytic endobronchial lesions (EEL) in confirming the diagnosis of lung cancer and to find additive yield over other techniques such as BW and FB. Rapid on-site evaluation (ROSE) analysis of all EBNA samples done in pathology lab allied center. Finally, histopathology proven 810 lung malignancy cases are included in study. Statistical analysis is done by using chi-test.

Results: In present study, 810 diagnosed lung cancer patients between 29-85 age group predominant males 59.25% (480/810) and smokers by addiction in 63.20% (512/810) cases. Presented with cough in 82.09% (665/810), clubbing in 56.17% (455/810) cases & mass lesion in chest radiograph in 42.22% (342/810) cases. Anatomical location is documented on right side of tracheobronchial in 59.01% (478/810) cases during bronchoscopy. Yield of forcep biopsy & forcep biopsy plus bronchial wash in EEL is 89.25% (723/810) & 93.08 % (754/810) respectively. Yield of EBNA, EBNA plus bronchial wash & EBNA plus forcep biopsy in EEL is 64.56% (523/810), 67.28% (545/810) & 97.65% (791/810) respectively. Total yield of all fiberoptic bronchoscopy guided procedures (EBNA+FB+BW) in EEL is 100%. Additional yield of EBNA in EEL over other CDTs is 6.92%. Sensitivity of forcep biopsy & EBNA in diagnosing lung malignancy in EEL is 89.25% & 64.56% respectively. Forcep biopsy is more sensitive technique than EBNA in EEL. ($p < 0.00001$). Sensitivity of forcep biopsy plus bronchial wash in EEL is 93.08% (754/810). Sensitivity of EBNA plus bronchial wash in EEL is 67.28% (545/810). Sensitivity of EBNA plus forcep biopsy in EEL is 97.65% (791/810) ($p<0.00001$)

Conclusion: Endobronchial needle aspiration has documented very crucial role in diagnosing lung cancer in comparison to other conventional diagnostic techniques. Although Forcep biopsy is more sensitive test then EBNA in EEL in diagnosing disease, we have documented EBNA has significant additive yield in proportionate number of cases. EBNA is safe, sensitive and cytology samples can give comparable results to histopathology.

Key Words: EBNA, Bronchoscopy, bronchial wash, forcep biopsy, cytology

INTRODUCTION

Lung cancer is the most often diagnosed cancer and leading cause of cancer-related deaths worldwide. In India, lung cancer accounts for 5.9% of all cancers and 8.1% of all cancer-related deaths.[1] Bronchoscopy dates back to the late 18th century where rigid illuminating tubes were used to examine the tracheobronchial tree.[2] Subsequently, with the introduction of the fiberoptic bronchoscope by Ikeda et al.,[3] bronchoscopy has revolutionized the practice of pulmonary medicine. In lung cancer, because of advances in real-time imaging and catheter-based techniques, bronchoscopy not only remains pivotal in diagnosis and staging but also allows therapeutic intervention for airway restoration in patients with central airway obstruction and treatment of early detected central airway cancers.[4]

Conventional bronchial washing, brushing, and endobronchial and transbronchial biopsy have variable yields depending on tumor location and accessibility. For endobronchial tumor, forceps biopsy gives the highest yield (74%) compared with brushing (59%) and washing (48%). The yield is increased further to 88% when these modalities are combined.[4] Addition of needle aspiration for endobronchial, submucosal, peripheral pulmonary lesion, or Peribronchial lymph node has been demonstrated to enhance diagnostic yield and is cost effective by obviating further need of invasive interventions.[4]

Transbronchial needle aspiration via flexible bronchoscopy is a well-established sampling tool for diagnosis of lung malignancies.[5] TBNA is superior to all other sampling modalities in peribronchial and submucosal lesions and is on par with bronchoscopic forcep biopsy in endobronchial tumor with an average diagnostic yield of 80 %.[6] Dasgupta et al.[5] & Govert et al [6] used flexible bronchoscopy and TBNA to diagnose carcinoma of the bronchus in endobronchial lesions, which may manifest as exophytic masses. They concluded that the diagnostic yield appeared to be further enhanced when this technique was combined with other conventional methods.

TBNA improves the yield of FOB when added to bronchial washing, brushing and forcep biopsy. [7,8] Despite all these positive aspects, however, TBNA is underutilized.[9] This has been ascribed to lack of formal training, difficulties with needle handling, poor success rate and insufficient cytological laboratory support.[10] Although a combination of all these techniques has been shown to increase the diagnostic yield, it is not always possible to perform all these sampling techniques in the same patient.[10] In present study, we have utilized all fiberoptic bronchoscopy guided all conventional diagnostic modalities including EBNA in diagnosing lung malignancies.

METHOD

Prospective, observational study conducted during January 2016 to December 2021 in chest diseases department in Venkatesh chest hospital & MIMSR Medical College Latur to find the role of EBNA in exophytic endobronchial lesions (EEL) in confirming the diagnosis of lung cancer and to find additive yield over other techniques such as BW and FB. Total 1280 suspected lung malignancy on clinical and radiological basis are screened and finally 810 confirmed lung cancer cases were included in study after hospital's ethical committee approval and written informed consent of patient (Figure 1).

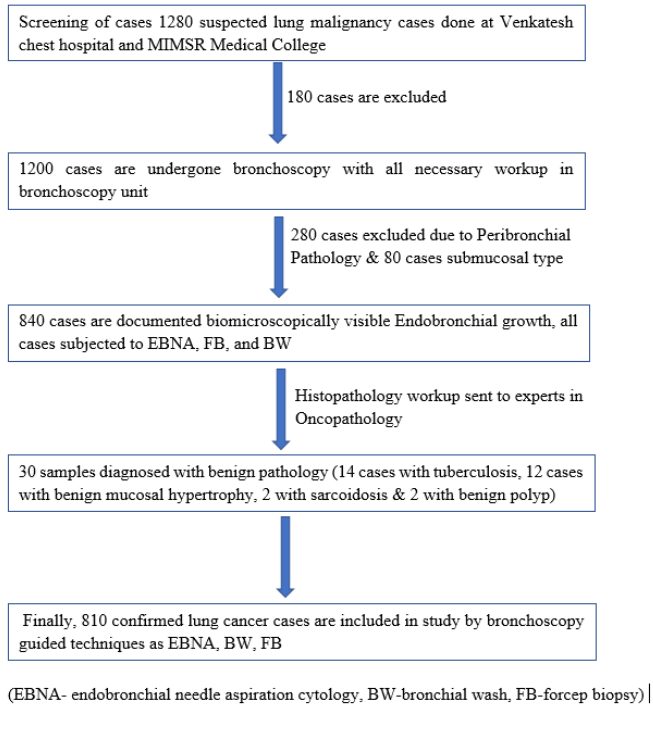

Figure 1: Flow of study

All of the cases with unexplained paralysis of vocal cord (hoarseness of voice) or stridor, chest X-ray with radiological features of malignancy (coin lesions, mass lesions, mediastinal widening, unilateral high hemidiaphragm, segmental/complete lung collapse and non-resolving pneumonia). Normal chest X-ray with high clinical suspicion, localized monophonic wheeze, endobronchial disease or growth symptoms such as hemoptysis, persistent cough, cases with suspected recurrent post-obstructive pneumonia, suspicious sputum cytology, unexplained and recurrent pleural effusion were included to the study.

Patients with coagulopathy which cannot be corrected and platelets 3, mechanical ventilation with high PEEP, refractory hypoxemia, recent myocardial infarction or unstable angina, significant dysrhythmia and hemodynamic instability, poor ability to cooperate with procedure were excluded.

The Fiber-optic Video Bronchoscope FUJINON EPX 201H is used during procedures in all patients enrolled in study and procedure performed by two operators. The upper airway is anesthetized with 2 ml of 10 % lignocaine solution. An additional small quantity of 1 % lignocaine is instilled through the bronchoscope for topical bronchial anesthesia, as needed. Patients if he or she is apprehensive are sedated with intravenous midazolam. Bronchoscope is inserted transnasally in about 85 % of cases, while in the remaining cases, the transoral route is used. Fluoroscopy facility is also available in our unit. During bronchoscopy we observed characteristic features of exophytic endobronchial lesions such as cauliflower like, polypoidal-like or nodular or multinodular endobronchial growth. In order to avoid contamination, EBNA is performed prior to other procedures such as bronchial brush, forcep biopsy and bronchial wash. EBNA procedure is done first to avoid false positive, and then, other techniques are performed. EBNA and forcep biopsy performed in most of the cases and other conventional diagnostic techniques such as bronchial wash and bronchial brush decision taken by operator doing bronchoscopy. Transbronchial needle aspiration is performed using MW 522 needle catheters (Mill-Rose Laboratories). During bronchoscopy, the catheter is passed through the biopsy channel with the needle retracted. Under direct vision, the needle is advanced into the endobronchial lesion; once the needle is appropriately placed within the lesion, it is minimally advanced, so that the entire length of the needle will be in the tissue. Then, the inner 22-gauge needle is retracted and locked in position. The needle is moved to and fro, under applied suction from a 20-ml syringe. The pressure is released before the needle is taken out from the tissue, to avoid false-positive aspirates. The aspirated material is blown into four or five slides, smeared, fixed with 95 % alcohol and sent for cytological examination at Pathology Department (Figure 2).

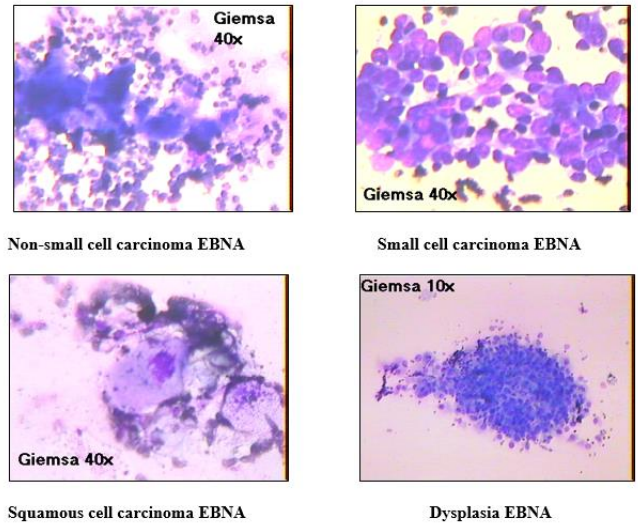

Figure 2: EBNA Cytology images

The statistical analysis is done using single proportion test (Chi test) in R-3.4 software. Significant values of x2 are seen from the probability table for different degrees of freedom required. A value of p is considered significant if it is below 0.05 and highly significant in case it is less than 0.001.

RESULTS

In present study, 810 diagnosed lung cancer patients between 29-85 age group, male are 59.25% (480/810) and females are 40.74% (330/810). In addiction history, we have observed 63.20% (512/810) cases are smoker and 43.25% cases with smoking index more than 20 pack years. Commoner symptoms are cough in 82.09% (665/810), Shortness of breath in 46.91% (380/810), hemoptysis in 30.37% (246/810) & chest pain in 16.79% (136/810) cases.

Clubbing on general physical examination is documented in 56.17% (455/810) cases. Commoner radiological presenting features are mass lesion in 42.22% (342/810) cases, Hilar opacity in 34.07% (276/810) cases & collapse segmental/lobar in 12.09% (98/810) cases. During bronchoscopy, anatomical location is documented on right side of tracheobronchial in 59.01% (478/810) cases as compared to left side of tracheobronchial wall 32.46% (263/810) & growth at carina documented in 8.51% cases (69/810) cases. Upper lobe bronchi are commoner site on both the sides as compared to other segmental bronchi (Table1).

Table 1 Clinical Evaluation, radiological patterns &anatomicall sites during bronchoscopy

Symptoms/signs	N	%
Cough	665	82.09
SOB	380	46.91
Hemoptysis	246	30.37
Chest Pain	136	16.79
Weight loss	123	15.18
Hoarseness of voice	41	5.06
Clubbing	455	56.17
SVC Syndrome	40	4.93
Lymphadenopathy	32	3.95
Radiological feature		
Mass lesion	342	42.22
Hilar Opacity	276	34.07
Collapse (lobar/segmental)	98	12.09
Consolidation	88	10.86
Pleural effusion	72	8.88
Mediastinal Widening	70	8.64
Site of Lesion		
Right side	478	59.01
Left side	263	32.46
Carina	69	8.51

In present study, yield of forcep biopsy & forcep biopsy plus bronchial wash in EEL is 89.25% (723/810) & 93.08 % (754/810) respectively. Yield of EBNA, EBNA plus bronchial wash & EBNA plus forcep biopsy in EEL is 64.56% (523/810), 67.28% (545/810) & 97.65% (791/810) respectively. Total yield of all fiberoptic bronchoscopy guided procedures (EBNA+FB+BW) in EEL is 100%. Additional yield of EBNA in EEL over other CDTs (Conventional Diagnostic Techniques such as forcep biopsy plus bronchial wash) is 6.92% (Table 2) Sensitivity of forcep biopsy & EBNA in diagnosing lung malignancy in EEL is 89.25% & 64.56% respectively. Forcep biopsy is more sensitive technique than EBNA in EEL. (p <0.00001)(Table 3).

Table 2 Diagnostic yield of fiberoptic bronchoscopy guided procedures in exophytic endobronchial lesions

No. of Patients of Exophytic Lesions (n=810)	Positive results (n=810)	Yield (%)
EBNA positive only	523	64.56
FB positive only	723	89.25
Both EBNA and Forcep Biopsy	791	97.65
EBNA+BW	545	67.28
FB+BW	754	93.08
EBNA+FB+BW	810	100

FB: Forcep Biopsy, BW-Bronchial Wash

Table 3 Sensitivity of EBNA and forcep biopsy in exophytic lesions during bronchoscopy

Procedure	Positive yield	Negative yield	Total Diagnosed cases
FB	723	87	810
EBNA	523	287	810

FB: Forcep Biopsy , $p < 0.00001$

Sensitivity of forcep biopsy plus bronchial wash in EEL is 93.08% (754/810). Sensitivity of EBNA plus bronchial wash in EEL is 67.28% (545/810). Sensitivity of EBNA plus forcep biopsy in EEL is 97.65% (791/810) ($p<0.00001$)(Table 4).

Table 4 Sensitivity of EBNA Plus Bronchial Wash and Forcep Biopsy in Exophytic Lesions during Bronchoscopy

Procedure	Positive yield	Negative yield	Total Diagnosed
Forcep Biopsy plus Bronchial wash	754	56	810
EBNA plus Bronchial wash	545	265	810
Both EBNA and Forcep Biopsy	791	19	810

DISCUSSION

Diagnostic yield of EBNA & EBNA plus techniques in endobronchial lesions:

Total yield of EBNA in exophytic endobronchial lesions is 64.56% (523/810). In our previous published studies we have documented 62.60% and 60.66% respectively in small sample size.[11,12] Kacar et al observed yield in 77.9% cases.[13] Overall diagnostic yield of EBNA central lesions suspected to be bronchogenic carcinoma is between 70-96%.[5,14-16]

Yield of EBNA, EBNA plus bronchial wash & EBNA plus forcep biopsy in EEL is 64.56% (523/810), 67.28% (545/810) & 97.65% (791/810) respectively. Thus, EBNA has documented complimentary role to other conventional diagnostic tests bronchial wash and forcep biopsy in increasing significant yield. Study conducted by Salathe et al. reported combination of TBNA with CDT increase yield from 65 to 79 %.[17] Gullon et al. concluded that addition of TBNA to CDT increases diagnostic yield of exophytic endobronchial lesions. [18] Caglayan et al. reported increase in yield from 79 to 91 % after addition of TBNA to CDTs ($p < 0.001$). [19] Gellert et al. and Hapomik et al. concluded that addition of TBNA to routine diagnostic technique improves the diagnostic yield. [10,20] Inadequate tissue sampling due to the presence of necrosis, a blood clot on the lesion or formation of crush artifacts by forcep biopsy makes TBNA an indispensable tool in these lesions.

Dasgupta et al. and guidelines from the American College of Chest Physicians (ACCP) stated that in endobronchial lesions that are either necrotic in appearance or highly vascular, TBNA may be used to obtain a sample by altering the technique in order to directly place the needle into the endobronchial lesion.[5,21] Contradictory to mentioned inference, Karahalli et al. reported no significant improvement in yield by adding TBNA to CDT. [22]

Yield of Forcep biopsy & forcep biopsy plus techniques in exophytic endobronchial lesions:

Total yield of forcep biopsy in exophytic endobronchial lesions is 89.25% (723/810). In our previous published studies we have documented 79.67% and 88.18% respectively in small sample size. [11,12] Kacar et al observed yield in 86.4% cases. [13] Due to the high yield of forceps biopsy for diagnosing endobronchial lesions (67-100%) suspicious for lung cancer, role of TBNA may be limited. [16]

Sensitivity of Forcep biopsy & EBNA in exophytic endobronchial lesions:

Sensitivity of forcep biopsy & EBNA in diagnosing lung malignancy in EEL is 89.25% & 64.56% respectively. Forcep biopsy is more sensitive technique than EBNA in EEL. In our previous published studies we have documented 79.67% & 62.60%, 88.18% & 71.65% respectively in small sample size. [11,12] Kacar et al observed yield in 86.4% & 77.9% respectively. [13] Forcep biopsy is considered as gold standard for diagnosis of malignancy in exophytic endobronchial lesions. Siddiqui et al. reported sensitivity of EBNA and forcep biopsy 69.2 and 88.3 %, respectively. [23] Dasgupta et al. concluded sensitivity of EBNA 85 % and of forcep biopsy 76 % in their studies in exophytic endobronchial lesions. [5] Karahalli et

al. reported 82.7 % sensitivity for forcep biopsy and 68.6 % for EBNA. [22] Other studies by SK Verma et al., Funhasi A et al., Kulpati D et al., Zavala DC et al. and Martin M et al. reported sensitivity of forcep biopsy 81.6%, 83%, 85.7%, 97% and 98 %, respectively in endobronchial lesions. [24] Contradictory to mentioned sensitivity patterns, Caglayan et al. reported higher sensitivity of TBNA over forcep biopsy, i.e., 92 versus 85 %, respectively.[19]

Additional yield of EBN A over other methods:

Additional yield of EBNA in Exophytic lesions over other CDTs (Conventional Diagnostic Techniques such as forcep biopsy plus bronchial wash) is 6.92%. In our previous published studies we have documented 4.19% and 4.87% respectively in small sample size. [11,12] Roth et al.reported that additional yield of EBNA is 8.04 % in their study. [25] Gullon et al. reported 9.5 % additional yield of EBNA in their study. [18] Kaçar et al. reported that additional yield is not satisfactory by EBNA over FB and other CDTs. [13] Karahalli et al. reported that additional yield of EBNA was 1 % in their study. [22] Lundgren et al. did not report an increase in sensitivity of bronchoscopy by adding EBNA to conventional diagnostic methods, but their results were later reversed in other studies. [26] Shure and Fedullo showed that the addition of needle aspiration to FB raised the diagnostic yield from 55 to 87%, and this increase was statistically significant. [27] Moreover, two other trials demonstrated that the combination of EBNA and conventional diagnostic methods increased the sensitivity compared to conventional methods alone. [5,8]

Sole yield of EBNA in exophytic endobronchial lesions & importance of ROSE in increasing yield:

Transbronchial needle aspiration is the only positive test in 52 cases out of 810 diagnosed cases. Although forcep biopsy has diagnosed 723/810 (89.25%) cases & EBNA 523/810 (64.56%) cases, only EBNA is the positive test in 52 cases. In 52 cases diagnosed by cytopathologist in EBNA samples are further processed to immunohistochemistry analysis. All EBNA samples are processed on site as we are having ROSE facility in our center. Govert et al.firstly described the utilization of ROSE-EBNA in sampling central neoplasms; however, this study was not randomized. [6]

Mondoni M et al done RCT and specially documented that addition of needle aspiration to conventional methods will increase the sensitivity of bronchoscopy. [28] They also mentioned that the rate of improvement in sensitivity was significantly higher in the ROSE-EBNA arm, suggesting the importance of ROSE in elevating the sensitivity of EBNA.

Other important observations in present study:

Histopathology type in present study: We have documented adenocarcinoma in 36.79% (298/810) cases, Squamous cell carcinoma in 38.51% (312/810) cases, non-small cell carcinoma in 12.71% (103//810) cases, small cell carcinoma in 8.88% (72/810) cases, and large cell carcinoma in 3.4% (25/810) cases. Adenocarcinoma trends are equally observed histological type as compared to Squamous cell type irrespective of smoking trends in study cases. We have documented that EBNA samples have given satisfactory results with histopathology specimens subjected to immunohistochemistry. In adenocarcinoma, 61% cases are EGFR positive, 18% ALK positive, and 12% ROS positive and 9% are all negative.

Complications during bronchoscopy procedures and techniques: bronchoscopy related hypoxemia documented in thirty-six cases and minor bleeding in forty-two cases. Other complications such as significant bleeding, pneumothorax and death were not seen. Minor bleeding was seen with forcep biopsy mainly in 5.18 % (42/810) cases. Shure et al Bollinger et al. Jin F et al. and ACCP Guidelines on Interventional Pulmonology reported mortality rate of 0.01 % and complication rate 0.7 % in their study. Other potentially life-threatening complications such as respiratory depression, airway obstruction, arrhythmias and infections were also not observed in our study. [21,27,29,30]

In present study predominant gender is male are 59.25% (480/810), smoking addiction in 63.20% (512/810) of which 43.25% cases having smoking

index more than 20 pack years. In spite of higher trends of tobacco exposure, adenocarcinoma histology has been documented in significant number with undifferentiated or non-small cell type.

Rationale for same findings would be processed tobacco or tobacco with added mixtures of nitrous compounds resulting into predisposition to adenocarcinoma.

Commoner radiological presenting features are mass lesion in 42.22% (342/810) cases, Hilar opacity in 34.07% (276/810). Bronchscopically,anatomical location of lesion documented on right side of tracheobronchial in 59.01% (478/810) cases as compared to left side of tracheobronchial wall 32.46% (263/810) & growth at carina documented in 8.51% cases (69/810) cases. Upper lobe bronchi are commoner site on both the sides as compared to other segmental bronchi.

CONCLUSIONS

Endobronchial needle aspiration has documented very crucial role in diagnosing lung cancer in comparison to other conventional diagnostic techniques. Endobronchial needle aspiration was found complimentary to conventional diagnostic techniques in diagnosing lung malignancy in exophytic endobronchial lesions. Importantly, EBNA samples can give rapid results, decrease chance for repeat procedure and guides adequacy of samples before end of bronchoscopy procedure.

Although Forcep biopsy is more sensitive test then EBNA in EEL in diagnosing disease, we have documented EBNA has significant additive yield in proportionate number of cases. Inadequate tissue sampling due to the presence of necrosis, blood clot over the lesion and formation of crush artifacts by forcep biopsy make EBNA a valuable technique in these lesions.

EBNA considered safe, especially when fleshy vascular endobronchial growth is present and risk of bleeding is high with forcep biopsy. EBNA cytology samples can give comparable results to histopathology. EBNA samples are equally processed for immunohistochemistry analysis as histopathology samples. Thus, EBNA is a beneficial, safe and minimally invasive bronchoscopic technique with insignificant side effect in the diagnosis bronchogenic carcinoma.

Disclosures

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Obez bireylerde diyabetin gece yeme sendromu ile ilişkisinin değerlendirilmesi

Evaluation of the relation of diabetes with night-eating syndrome in obese individuals

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ABSTRACT

Objective: The aim of this study was to investigate the relationship between diabetes and night eating syndrome in obese individuals.
Material and method: This cross sectional study was conducted with 113 (94 female, 19 male) obese individuals between 01.10.2018 and 31.10.2018. Measurements of body weight and height of individuals were made according to the anthropometric measurement technique. Socio-demographic data form was applied by face-to-face survey method. The diagnostic criteria for nighttime eating disorder, which has been validated in Turkish, were used in the evaluation of night eating syndrome.
Results: It was seen that the mean for nighttime eating disorder scale of the group with diabetes was 24,68±8,60 and the mean for nighttime eating disorder scale score of the non-diabetic group was 24,25±10,46 (p=0,112). On the other hand according to body weight there was a significant difference between two group according to presence of night eating syndrome (p=0,112).
Conclusion: It was found that the presence of night eating syndrome do not differ according to diabetes, but body weight.
Key words: Eating disorders, Medical diet treatment in eating disorders, Night eating syndrome, Obesity, Diabetes

GİRİŞ

Gece yeme sendromu Stunkard ve arkadaşları tarafından sabah yemek yeme ihtiyacı duymama, akşam yemeğinden sonra fazla yemek yeme ve uyuyamama hastalığı ölçütlerinden oluşan bir sendrom olarak tanımlanmıştır.[1] Gece yeme sendromunun Amerika Birleşik Devletleri'nde genel popülasyonda görülme oranı %1,5, bariatrik cerrahi uygulananlarda görülme oranı %8-4 ve obezite kliniklerinde görülme oranı %6-14 olarak bildirilmektedir.[2] Ülkemizde yapılan çalışmalarda obezlerde 21.85%, sağlıklı genç bireylerde 10.6 % gibi oranlar bildirilmiştir.[3,4]Sıklıkla ilgili bu geniş farklılıklar tanısal kriterlerin standardize olmamsından kaynaklanmaktadır.

Genel toplumla karşılaştırıldığında, kilolu ve obez bireylerde gece yeme sendromunun daha yaygın olduğu görülmektedir.[5]Obez bireylerde yapılan çalışmalarda kilo kontrolü tedavi programlarına dirençli olan katılımcılarda görülme düzeyinin çok daha yüksek olduğu saptanmış ve %51-64 arasında değişen oranlar bildirilmiştir.[6] Literatürde gece yeme alışkanlığının obezite ile bağlantılı olmadığı, aslında kilo alımından önce başlayıp, obeziteye de yol açabileceği ile ilgili yayınlar mevcuttur.[7]

Gece yeme sendromunun sık olduğu gruplardan birisi de tip 2 diyabettir. Tip 2 Diyabetli hastalarda prevalansın %3,8 ile %12,4 arasında olduğu tespit edilmiştir. Daha da önemlisi, diyabetli hastalarda gece yeme sendromu kötü glisemik kontrol ile ilişkilidir. Gece yeme sendromu semptomlarının da zayıf metabolik kontrol ile ilişkili olduğuna dair kanıtlar vardır.[8] Diyabetli hastaların glisemik kontrolünde gece yeme rolünün daha iyi anlaşılması için bu ilişkiyi hem sendrom düzeyi hem de belirti seviyesi (beslenme, uyku ve ruhsal belirtileri tek tek incelemek; bunların her biri, tek tek glisemik işlevler üzerinde etkisi) düzeyinde inceleyen daha ileri çalışmalara ihtiyaç vardır. Bu çalışmanın amacı; obez bireylerde diyabetin gece yeme sendromu ile ilişkisi incelemektir.

YÖNTEM

Kesitsel desende yapılan bu çalışma İstanbul'da bir özel hastanenin Beslenme ve Diyet Polikliniğine 01.10.2018- 01.11.2018 döneminde başvuran toplam 113 katılımcı ile yürütülmüştür. 18 yaşından küçük olanlar, Beden Kütle İndeksi 30 kg/m2'dan küçük olanlar ve sekonder obezitesi olanlar çalışma dışı tutulmuşlardır.

Katılımcıların antropometrik ölçümleri araştırmacılar tarafından alınmıştır. Katılımcıların kilo ve boy değerlendirmeleri için katılımcıların ayakkabısız ve ince giysi ile olmaları istenmiş, kalibrasyonu düzenli yapılan baskül+ stadiometre (JAWON XC-Contact Marka) ile Frankfort düzlemde iken boy uzunluğu ve vücut ağırlığı tespiti yapılmıştır. BKİ değerleri vücut ağırlığı ve boy uzunlukları kullanılarak aşağıdaki formül ile hesaplanmıştır.

BKİ (kg/m^2) = Vücut Ağırlığı (kg) / Boy Uzunluğu (m^2)

BKİ değerleri <18,50 kg/m2, zayıf, 18,50-24,99 kg/m2 normal kilolu, 25,00-29,99 kg/m2 fazla kilolu, 30,00-34,99kg/m2 şişman (1. Derece obez), 35,00-39,99 kg/m2 şişman (2. Derece obez), >40,00 kg/m2 ileri derecede obez (morbit-3. Derece obez) olarak sınıflandırılmıştır.

Çalışmaya katılan tüm bireylere gece yeme anketi, sosyodemografik veri formu yüz yüze görüşme tekniği ile uygulanmıştır. Sosyodemografik veri formu ile katılımcıların cinsiyet, yaş, eğitim durumu, çalışma, sigara kullanım durumu gibi sosyodemografik bilgileri sorgulayan çoktan seçmeli ve açık uçlu sorular ile toplanmıştır.

Katılımcıların gece yeme sendromu durumu Allison ve arkadaşları tarafından geliştirilen, 14 sorudan oluşan bir tarama anketi ile değerlendirilmiştir. Anketin geçerlilik ve güvenirlik çalışması yapılmıştır.[9]Ölçeğin güvenilirlik düzeyini belirlemek amacıyla Cronbach alfa iç tutarlılık katsayısı ve test tekrar test güvenilirlik katsayısı hesaplanmıştır. Hastaların GYA iç tutarlılık analizinde ölçeğe ait 16 alt soru arasında Cronbach alfa kat sayısı 0,69 olarak bulunmuştur. Anket sabah iştahı ve günün ilk besin alımı, akşam ve gece yemeleri, akşam yemeğinden sonra besin alımı oranı, aşermeler, gece yeme davranışı üzerindeki kontrol, uykuya dalma güçlüğü, gece uyanarak yeme sıklığı, gece yemeleri sırasında farkındalık ve duygu durum ile ilgili soruları içermektedir. Anketteki ilk dokuz soru tüm katılımcılar tarafından doldurulmaktadır. Sonraki sorularda gece uyanmayan veya atıştırması olmayan katılımcıların devam etmemesi için uyarı vardır. Soru 10-12'yi gece uyanmaları olan, soru 13 ve 14'ü ise gece atıştırmaları olan katılımcıların doldurması gerekir. Anketteki 7. Madde dışındaki maddeler beşli Likert tipi ölçümle 0-4 arasında puanlanmaktadır. 7. Madde gün içi duygu durum değişikliği sorgulanmakta ve gün içi değişiklik olmayanlar 0 puan almaktadır. Madde 1, 4 ve 14 ters puanlanmaktadır. Gece yarısı atıştırmalarının ne kadar farkında olduğunu soran madde 13, GYS' nin uyku ile ilişkili yeme bozukluğundan ayırt edilebilmesi için sorulmakta, ancak puanlamaya katılmamaktadır.

Toplam alınacak puan 0-52 arasındadır. Ankette yer alan 15. ve 16. soruların ise ek soru olarak kullanılması önerilmiş ama puanlamaya katılmamıştır. Özgün çalışmada 25 ve üzerindeki puan için GYS-1'in var olduğu, olduğu belirtilmiştir.[9]

Çalışma için Okan Üniversitesi Tıp Fakültesi Klinik Araştırmalar Etik Kurulundan gerekli izinler alınmıştır(12.12.2018/17).Araştırmaya dahil edilen tüm bireyler çalışma öncesinde sözlü ve yazılı olarak bilgilendirilmiş ve bilgilendirmiş gönüllü onam formu alınmıştır.

Tüm İstatistiksel değerlendirmeler için SPSS versiyon 18.0 yazılımı kullanılmıştır. Elde edilen sürekli değişkenler (nicel değişkenler) ortalama ($\bar{x}$), standart sapma (ss) değerleri ile sunulmuş ve grupların karşılaştırılmasında normal dağılım gösteren parametrelerde İki Ortalama Arasındaki Farkın Anlamlılık Testi (bağımsız gruplar t testi), normal dağılım göstermeyen parametrelerde ise Mann-Whitney U testi kullanılmıştır.

Kategorik değişkenlerin sunumu için ise sayı (S) ve yüzde (%) değerleri kullanılmış Pearson Ki-kare testi ve Fisher Exact testi ile değerlendirilmiştir. Önemlilik düzeyi $p<0,05$ olarak kabul edilmiştir.

SONUÇLAR

Çalışmaya 70 diyabetli, 43 diyabeti olmayan grup olmak üzere toplam 113 birey katılmıştır. Katılımcıların genel özellikleri tablo 1'de verilmiştir.

Anket için kesme değeri 25 olarak kabul edildiğinde diyabetli grupta Gece yeme sendromu olanların oranı %44,3 iken diyabeti olmayan grupta %27,9 bulunmuştur (p=0,082). Diyabeti olan ve diyabeti olmayan BKİ sınıflarına göre anlamlı bir farklılık gösterilememiştir (Tablo 2). Katılımcılara gece yeme sendromunun hayatlarını ne kadar etkilediği sorulmuştur. Diyabetik olsun veya olmasın gece yeme sendromu varlığının bireylerin hayatlarını etkilemediği görülmüştür.

Tablo 1. Katılımcıların genel özellikleri

		Diyabeti Olan	Diyabeti Olmayan	Toplam
		% (n)	%(n)	% (n)
Yaş (yıl)		41,0±14	39,0±12	40,0±13,0
Cinsiyet	Erkek	16,0 (11)	19,0 (8)	16,8 (19)
	Kadın	84,0 (59)	81,0 (35)	83,2 (94)
Eğitim durumu	8 yıl ve altı	16,6 (12)	18,6 (8)	17,7 (20)
	Lise	37,5 (27)	20,9 (9)	31,8 (36)
	Üniversite ve üstü	45,9 (33)	60,5 (26)	50,5 (59)
Meslek	Çalışan	88,9 (62)	83,7 (36)	86,7 (98)
	Çalışmayan	11,1 (8)	16,3 (7)	13,3 (15)
Sigara	İçmiyor	68,0 (49)	60,4 (26)	66,3 (75)
	İçiyor	32,0 (21)	39,6 (17)	33,7 (38)
BKİ (kg/m^2)		33,9±3,5	31,9±2,5	32,9±3,0
Boy Uzunluğu(m)		1,61±0,08	1,62±0,07	1,61±0,07
Vücut Ağırlığı(kg)		88,6±12,9	84±8,9	88,3±10,1

Tablo 2: Gece yeme sendromunun BKI ile ilişkisi

	Diyabetik		Non-diyabetik	
BKI	**GYS var % (n)**	**GYS yok % (n)**	**GYS var % (n)**	**GYS yok % (n)**
30-34,9kg/m^2	61.3 (19)	66.6 (26)	100 (12)	87.2 (27)
35-39,9kg/m^2	38.7 (12)	25.6 (10)	**0 (0)**	6.4 (2)
≥40kg/m^2	**0 (0)**	7.8 (3)	**0 (0)**	6.4(2)
P	**0.183**		**0.426**	

TARTIŞMA

Çalışma sonucunda gece yeme sendromu sıklığının diyabeti olan ve olmayan gruplar arasında anlamlı olarak farklılık göstermediği görülmüştür. Gece Yeme Bozukluğu ve diyabet arasındaki ilişkiyi açıklayan az sayıda çalışma vardır. Literatürdeki bilgilere göre GYS'nin diyabetli hastalarda %3,8-%12,4 oranında olduğu tahmin edilmektedir (10-12). Daha önce diyabetli hastalar arasında yapılmış çalışmaların sonuçlarına göre; GYS ve glisemik kontrol arasındaki ilişknin karmaşık olduğu bulunmuştur. Ayrıca, diyabetli hastalarda, gece yeme bozukluğunun başarısız diyet kontrolü, kötü glikoz izlemi ve obezite ile ilişkili olduğunu gösteren bazı bulgular da vardır. Diyabet ve GYS'si olan hastalarda, yalnızca diyabet olan hastalara göre daha yüksek HbA1c seviyesi olduğunu göstermiştir (11). Fakat, diğer gruplar arasında HbA1c seviyelerinde farklılık görülmemiştir. Kısaca bu karışık sonuçlar GYS ve diyabet arasında ilişki kurulmasına olanak sağlayamamıştır (13). GYS, obez olmayanlarda da görülmesine rağmen, obezlerde GYS'nin görülme oranının özellikle zayıflama tedavisi için başvuranlarda daha fazla olduğu bulunmuştur (14-16). GYS'nin zayıflama programlarına başvuran obez bireylerde, obez olmayan bireylere oranla prevalansları daha yüksek görülmüştür (17). Bununla birlikte, çalışmalarda GYS ve obezite arasında anlamlı bir ilişki olduğu sonucu bulunamamıştır (18). Gece yeme bozukluğu ve diyabet arasındaki ilişkiyi açıklayan az sayıda çalışma vardır.

Gece yemek yeme alışkanlığı diyabeti olan grupta GYS puanlamalarına göre hayatı anlamlı derecede etkilediği saptanmıştır (p=<0,01) (Tablo 26, Tablo 27). GYS'si olan yatan hastalarda gece tüketilen yiyeceklerin çoğunu karbonhidratlar oluştururken sabahları karbonhidrat tüketiminin daha düşük olduğu belirtilmiştir. Hastaların yarısından fazlasının geceleri ekmek, şekerlemeler gibi besinleri tükettikleri ve akşam tüketilen yiyeceklerin protein içeriğinin, karbonhidratlara göre düşük olduğu belirtilmiştir (19).

Yapılan bir uyku çalışmasında, Amerikalı GYS olan bireyler (Ortalama BKI 36 kg/m2) normal uyku-uyanma davranışı göstermesine karşın, 2. Faz ve 3. Faz uykuda GYS olmayan bireylere göre, daha az normal davranış göstermiştir. Sonuç olarak, daha az toplam uyku süresi ve uyku kalitesinde azalma görülmüştür (20).

Sonuç olarak gece yeme sendromunun sıklığının diayebt varlığı ile anlamlı olarak farklılık göstermediği; obez bireylerde diyabetik durumun GYS üzerinde farklılık yaratmadığı görülmektedir. Bu açıdan GYS tedavisinin multidisipliner bir yaklaşımla, diyetisyen, doktor ve psikologtan oluşan bir ekip içerisinde değerlendirilmesi ve hastada farklılık yaratması faydalı olacaktır.

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Evaluation of driver's license health reports prepared at Kartal Dr.Lütfi Kırdar City Hospital Educational Family Health Centers

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ABSTRACT

Objective: The aim of this study is to determine the characteristics of the people who are given a driver's health report and to reveal the problems that may be encountered in the reporting processes and the points to be considered.

Material and method: Driver health reports prepared in Kartal Dr. Lütfi Kırdar City Hospital Education FHCs in the years 2020-2022 were reviewed retrospectively.The sociodemographic and health characteristics of 300 people who were given a driver's health report were determined.Data were analyzed with SPSS 17 (Statistical Package for the Social Sciences-IBM) program.

Results: 55%(n=165) of the participants were female and 45%(n=135) were male.The mean age is 35.9±12.2 years.66.7%(n=200) of the participants are universary graduates.18.0%(n=54) of the participants had a limitation.There was no significant difference between the disability status and gender,year of application and education level.While 49.3%(n=148) of the participants applied for a license for the first time,50.7%(n=152) applied for renewal.18.0% (n=54) of the participants had an additional disease; 3.3%(n=10) had diabetes and 5.0% (n=15) had hypertension. 13.0% (n=39) of the participants had an additional disease other than diabetes and hypertension.

Conclusion: Additional diseases, drug use status and limitations of the participants applying for a driver's license health report should be screened, the driver's health reports should be prepared in accordance with the regulation, and they should be referred to an additional branch or higher level health institutions when necessary.

Keywords: driver license health report, family medicine, family health center

INTRODUCTION

It is obligated for driver candidates and the ones who want to renew their driving licenses to verify with a doctor's report that the health condititons are suitable for driving and traffic in Türkiye. In this study it was aimed to determine the characteristics and related factors of people who had driver's licence health report (DLHR) in E-FHCs (Educational-Family Health Centers) affiliated to Kartal Dr.Lütfi Kırdar City Hospital.

METHOD

In this cross-sectional, descriptive study the DLHRs which were prepared for the drivers aged 18 and over, between 2020 and 2022 at Health Sciences University E-FHCs of Kartal Dr. LütfiKırdar City Hospital were retrospectivly scanned. Some participans were invited face to face and some of them were called by phone. Age, gender, application date, eduacation status, first time to apply for a driver's license or for renewal, whether there is a restriction code, co-morbidities, chronic drug use, referral status, disability status, regular health service utilization from E-FHCs, smoking status were recorded of the 300 people who accept to be participant in the data collection form prepared by the researchers.

The data obtained were analyzed with the SPSS 17.0 package program (Statistical Package for the Social Sciences - IBM®). Frequency, percentage, mean, median, minimum, maximum value and standard deviation were used as descriptive statistics. The assumption of normal distribution of all variables was evaluated with the Shapiro-Wilk test, and Student's t test, ANOVA test, and Pearson correlation analysis were used for continuous variables with normal distribution. Chi-Square test was used in the evaluation of categorical variables. P values of <0,05 were accepted as statistically significant for all analyses. Ethics commitee approval was obtained from the local clinical research ethics committee before starting the study (date: 22/06/2021, number: 2021/514/204/15)

RESULTS

45% (n=135) of the participants were male and 55% (n=165) were female, with a mean age of 35.9 ± 12.2 years. Considering the age categories, 54.7% (n=164) of the participants were between the ages of 18-34, 42.3% (n=127) were between the ages of 35-64, and 3% (n=9) were 65 years and older.

It was determined that 6.7% of the participants were primary school graduates, 5.7% were secondary school graduates, 21% were high school graduates and 66.7% were university graduates. It was observed that 11.9% of the male participants were primary school graduates, 8.1% were secondary school graduates, 28.9% were high school graduates and 51.1% were university graduates. It was determined that 2.4% of the female participants were primary school graduates, 3.6% were secondary school graduates, 14.5% were high school graduates, and 79.4% were university graduates.

There was a significant difference between age groups in terms of the gender of the participants. 45.2% (n=61) of the male participants were in the 18-34 age range, 50.4% (n=68) were in the 35-64 age range, and 4.4% (n=6) were in the 65 and over age range. 62.4% (n=103) of the female participants were in the 18-34 age range, 35.8% (n=59) were in the 35-64 age range, 1.8% (n=3) were 65 years and older (p=0.009). When the relationship between gender and educational status was examined, there was a significant difference between male and female participants (p=0.000). It was observed that 78.8% (n=130) of the male participants did not smoke, and 53.0% (n=71) of the female participants did not smoke. A statistically significant difference was found between the gender of the participants and their smoking status (p=0.000) (Table 1).

Table 1: General characteristics of participants

		Man % (n)	Woman % (n)	Total % (n)	P
Age		37.8±13.5	34.3±10.9	35.9±12.2	0.016
	18-34 years	45.2(n=61)	62.4(n=103)	54.7(n=164)	0,009
	35-64 years	50.4(n=68)	35.8(n=59)	42.3(n=127)	
	≥65 years	4.4(n=6)	1.8(n=3)	3.0(n=9)	
Education	Primaryschool	11.9(n=16)	2.4(n=4)	6.7(n=20)	0,000
	Middleschool	8.1(n=11)	3.6(n=6)	5.6(n=17)	
	High school	28.9(n=39)	14.4(n=24)	21(n=63)	
	University	51.1(n=69)	79.6(n=131)	66.7(n=200)	
Smoking status	Yes	21.2(n=35)	47.0(n=63)	32.8(n=98)	0.000
	No	78.8(n=130)	53.0(n=71)	67.2(n=201)	

When the application years of the participants are examined, 28% (n=84) applied for DLHR in 2020, 42.7% (n=128) in 2021 and 29.3% (n=88) in 2022. While 21.5% (n=29) of male participants applied in 2020, 33.4% (n=55) of female participants applied for DLHR in 2020. There was a significant difference between the application years of male and female participants (p:0.012) (Table 2).

When the relationship between the year of application for DLHR and the level of education was examined, a significant difference was found. While 79.8% (n=67) of those who applied for DLHR in 2020 were university graduates, this rate decreased to 74.2% (n=95) in 2021 and to 43.2% (n=38) in 2022. DLHR Applications being on the other education levels increased (p=0.000) (Table 3).

Table 2: Years of application by gender of applicants

		Man % (n)	Woman % (n)	Total % (n)	P
Years	2020	21.5(n=29)	33.4(n=55)	28(n=84)	0,012
	2021	41.5(n=56)	43.6(n=72)	42.7(n=128)	
	2022	37(n=50)	23(n=38)	29.3(n=88)	

Table 3:Distribution of DLHR applicants of education levels

		2020 % (n)	2021 % (n)	2022 % (n)
Educationl evel	Primaryschool	0.0 (0)	7.8 (10)	11.4 (10)
	Middleschool	1.2 (1)	3.2 (4)	13.6 (12)
	High school	19 (16)	14.8 (19)	31.8 (28)
	University	79.8 (67)	74.2 (95)	43.2 (38)

While 49.3% (n=148) of the participants applied for DLHR for the first time, 50.7% (n=152) applied for renewal. While the mean age of the participants who applied for DLHR for the first time was 28.1±6.8 years, the average age of those who applied for renewal was 43.5±11.6 years. While 32.4% (n=48) of those who applied for DLHR for the first time were male, 67.6% (n=100) were female. (p=0.000). While applications to receive DLHR for the first time decreased over the years, renewal applications increased significantly (p=0.000), there was no significant difference between the type of DLHR application and education level (p=0.304) (Table 4).

Table 4: Relationships between DLHR application type and general features

		First application % (n)	Renewal % (n)	P
Age		28.1 ± 6.8	43.5 ±11.6	0,000
Gender	Woman	67.6 (100)	42.8 (65)	0,000
	Man	32.4 (48)	57.2 (87)	
Year	2020	37.1 (55)	19.1 (29)	0,000
	2021	45.3 (67)	40.1 (61)	
	2022	17.6 (26)	40.8 (62)	
Education level	Primary school	4.7 (7)	8.6 (13)	0,304
	Middle school	4.1 (6)	7.2 (11)	
	High school	23.0 (34)	19.1 (29)	
	University	68.2 (101)	65.1 (99)	

18.0% (n=54) of the participants had a limitation. Considering the limitations, it was seen that 98.1% (n=53) used glasses and/or contact lenses due to refractive error, and 1.9% (n=1) had an orthopedic limitation. There was no significant difference between the presence of limitation and gender, year of application and education level. While 59.3% (n=32) of the participants with limitations were female, 40.7% (n=22) were male. While 54.1% (n=133) of the participants without limitations were female, 45.9% (n=113) were male. It was seen that 29.6% (n=16) of the participants with limitations applied for DLHR in 2020, 46.3% (n=25) in 2021, and 24.1% (n=13) in 2022. Of the participants without limitations, 27.6% (n=68) applied for DLHR in 2020, 41.9% (n=103) in 2021, and 30.5% (n=75) in 2022.

While 5.6%(n=3) of the participants with limitations were primary school graduates, 5.6% (n=3) were secondary school graduates, 18.5% (n=10 high school graduates, 70.4% (n=38) university graduates. While 6.9% (n=17) of the participants without limitations were primary school graduates, 5.7% (n=14) were secondary school graduates, 21.5% (n=53) were high school graduates, and 65.9% (n=162) were university graduates (Table 5).

Table 5: Relationships between referral status of applicants for DLHR and other variables

		Referred % (n)	Non-referred % (n)	P
Age		32.5 ±10.9	36.4 ±12.3	0,052
Gender	Woman	77.5 (31)	51.5 (134)	0,002
	Man	22.5 (9)	48.5 (126)	
Year	2020	47.5 (19)	25.0 (65)	0.000
	2021	47.5 (19)	41.9 (109)	
	2022	5 (2)	33.1 (86)	
Education	Primary school	2.5 (1)	7.3 (19)	0,417
	Middle school	5.0 (2)	5.8 (15)	
	High school	15.0 (6)	21.9 (57)	
	University	77.5 (31)	65.0(169)	
Chronic diseases	Yes	22.5 (9)	17.3 (45)	0.506
	No	77.5 (31)	82.7 (215)	
Limitations	Yes	10.0 (4)	19.2 (50)	0.189
	No	90.0 (36)	80.8 (210)	
Application	Renewal	22.5 (9)	55.0 (143)	0.000
	First time	77.5 (31)	45.0 (117)	

18.0% (n=54) of the participants had at least one additional disease. 3.3% (n=10) had diabetes and 5.0% (n=15) had hypertension. 13% (n=39) of the participants had an additional disease other than diabetes and hypertension. 8.8% (n=13) of the first-time applicants for DLHR and 27.0% (n=41) of the applicants for renewal had additional disease (p=0.000). While there was a limitation in 17.6% (n=26) of those applying for DLHR for the first time, this rate was 18.4% (n=28) in those applying for renewal (p=0.881).

14.3% (n=43) of the participants had a history of medical drug use. While 23.3% (n=10) of those with a history of medical drug use applied for DLHR for the first time, 76.7% (n=33) applied for renewal examination (p=0.000).

13.3% (n=40) of the participants were referred to a higher institution. A statistically significant difference was shown between referral status and gender, year of application, and first-time and renewal application. While 77.5% (n=31) of the referred participants were female, 22.5% (n=9) were male. Of the non-referred participants, 51.5% (n=134) were female, while 48.5% (n=126) were male. While 47.5% (n=19) of the referred participants applied for DLHR in 2020, 47.5% (n=19) applied in 2021 and 5% (n=2) in 2022. While 25% (n=65) of the non-referred participants applied for DLHR in 2020, 41.9% (n=109) applied in 2021 and 33.1% (n=86) in 2022. Of the referred participants, 2.5% (n=1) were primary school graduates, 5% (n=2) were secondary school graduates, 15% (n=6) were high school graduates, and 77.5% (n=31) were university graduates. On the other hand, 7.3% (n=19) of the participants who were not referred were primary school graduates, 5.8% (n=15) were secondary school graduates, 21.9% (n=57) were high school graduates, and 65% (n=169) were university graduates.

While 22.5% (n=9) of the referred participants had an additional disease, 77.5% (n=31) did not have any additional disease. On the other hand, 17.3% (n=45) of the participants who were not referred had an additional disease, and 82.7% (n=215) did not have any additional disease. 10%(n=4) of the referred participants had limitations, 90% (n=36) had no limitations. While 19.2% (n=50) of the non-referred participants had limitations, 80.8% (n=210) had no limitations. While 22.5% (n=9) of the referred participants applied for renewal, 77.5% (n=31) applied for the first time. While 55% (n=143) of the non-referred participants applied for license renewal, 45% (n=117) applied for DLHR for the first time

59.0% (n=177) of the participants had used E-FHC at least once before applying for DLHR. While 56.5% (n=100) of the participants using E-FHC were female, 43.5% (n=77) were male.

While 52.8% (n=65) of the participants who did not use E-FHC were female, 47.2% (n=58) were male. While 32.2% (n=57) of the participants using E-FHC applied in 2020, 36.2% (n=64) applied in 2021 and 31.6% (n=6) in 2022. While 22% (n=27) of the participants who did not use E-FHC applied in 2020, 52% (n=64) applied in 2021 and 26% (n=32) in 2022. While 7.3% (n=13) of the participants using E-FHC were primary school graduates, 6.8% (n=12) were secondary school graduates, 20.9% (n=37) were high school graduates, 65% (n=115) were a university graduate. While 5.7% (n=7) of the participants who did not use E-FHC were primary school graduates, 4.1% (n=5) were secondary school graduates, 21.1% (n=26) high school graduates, and 69.1% (n=85) university graduates. While 18.6% (n=33) of the participants who used E-FHC had an additional disease, 81.4% (n=144) did not have any additional disease. While 17.1% (n=21) of the participants who did not use ASM had an additional disease, 82.9% (n=102) did not have any additional disease. 17.5% (n=31) Of the participants using E-FHC, had limitations, 82.5% (n=146) had no limitation status. 18.7% (n=23) Of the participants who did not use E-FHC, had limitations, 81.3% (n=100) had no limitations. While 49.7% (n=88) of the participants with E-FHC use applied for license renewal, 50.3% (n=89) applied for the first time. While 52% (n=64) of the participants who did not use E-FHC applied for renewal, 48% (n=59) applied for the first time. While 13.6% (n=24) of the participants with E-FHC use were referred, 86.4% (n=153) were not referred. While 13%(n=16) of the participants who did not use E-FHC were referred, 87%(n=107) were not referred.

While there was a significant difference between E-FHC use and the year of admission, there was no significant difference in terms of other variables.

DISCUSSION

In our study, it was aimed to determine the points that the family physicians should pay attention when issuing DLHR by evaluating the medical and socio-demographic characteristics of the driver/driver candidates in order to prevent or minimize traffic accidents related to the medical conditions of drivers, which are among the leading causes of death.

It was determined that a high percentage of female participants were university graduates, which is thought to mean that as the level of education in women increases, the rate of driving increases. Although it is seen that the participants mostly apply for DLHR in 2021, it is seen that there is a high demand for DLHR in the first 6 months of 2022. We think that this is due to the fact that Turkey will switch to new types of driver's licenses in 2023. It is seen that the application rate of university graduates has decreased over the years. It can be concluded that over the years, people with a low level of education have applied for a driver's license report at a high rate. We think that these applications caused by who wants to get a new type of driver's license.

It was determined that the participants who applied for a driver's license for the first time were women with a high percentage and those who applied for renewal were mostly men. It was observed that the highest rate of participants with limitations was in 2021. It was found that those with a history of medical drug use applied for renewal at a high rate, and those who applied for their driver's license for the first time had a low rate of medical drug use. It can be thought that this situation is due to the older age of the applicants for renewal.

In a study conducted by Sümer, the personal health declaration forms and examination results of 3215 people who applied to the family medicine outpatient clinic to obtain a drivers's health report were compared. When the forms were examined, 2172 people (67.6%) declared that did not have any disease, while 1043 people (32.3%) declared that they had at least one health problem. As a result of the examinations, normal examination findings were found in 1907 people (59.3%), and at least one abnormal examination finding was found in 1308 people (40.7%). The most common health problems were visual impairment in 832 people (25.9%), joint disorders in 269 people (8.4%), cardiovascular disease in 171 people (5.3%), nervous system disease in 118 people (4.9%) and Diabetes mellitus in 113 people (3.5%) respectively (2). In our study, 18.0% (n=54) of the participants had a health problem; 3.3% (n=10) had diabetes and 5.0% (n=15) had hypertension. 13% (n=39) of the participants had an additional disease other than diabetes and hypertension. 14.3% (n=43) of the participants had a history of medical drug use. Considering the limitations of the participants, it was observed that 98.1% (n=53) wore glasses for visual impairments and 1.9% (n=1) had orthopedic limitations. Visual impairment is the most common problem in drivers and driver candidates. This is the common result with this study and our study. Similar results were found for visual impairment in both study.

Traffic accidents are one of the the most important reasons of injury In Türkiye, its frequency increases and causes mortality and morbidity. After traffic accidents the severity of the injury will occur in people affects morbidity and therefore disability rates (3). The rate of traffic accidents due to medical reasons is unknown. As a result of a study conducted in Canada and the USA, it is shown that less than 5% of commercial vehicle accidents are due to cardiovascular diseases. According to studies conducted in Europe, it has been reported that approximately 0.1% of traffic accidents are due to medical reasons, and 10-25% of this is due to cardiac conditions (4). According to accident statistics, vehicle users have the biggest error rate with a rate of 95%. The main error factors related to the user; speed, alcohol and substance exposure, insomnia and fatigue, and no use of seat belts, child car seats and helmets. Relevant legislation has been advanced in Turkiye, but is not being followed properly (5).

In a study conducted by Delice in 2012, a significant relationship was found between the rate of female drivers and the number of traffic accidents per driver. It has ben determined that as the rate of female drivers in the provinces

increases, the total number of accidents per driver increases (6). In a study conducted by Balkan Bilgin, the effects of personality traits and attitudes on risky behaviors in traffic were examined. In the study, it was found that personality traits have direct or indirect effects on risky driving. It has been observed that drivers who score high on the evaluated personality traits of anxiety, aggression, and impulsivity have a higher rate of risky driving (7).

Some studies have investigated the risks of old age in terms of driving and accidents. The possible risks of advanced age have been revealed and it has been seen that it causes traffic accidents to a considerable extent. In order to renew the driver's license of an elderly driver, that person must undergo a detailed medical and psychological examination for eligibility to drive. People over the age of 65 should be evaluated with intermittent examinations in terms of health problems that will affect their driving characteristics, and the necessary regulations for the renewal of their licenses should be included in the legislation (8). In a study conducted by Ivers et al., it was stated that the risk of having an accident increases after the age of 80, the frequency of fatal accidents increases, and they are more judged for causing an accident (9). Doctors examining elderly patients should question whether their patients drive and manage possible risks by making detailed assessments. It is important to tell patients about the possibility of the patient’s current diseases and the drugs they are using to create a risky situation in driving. In case of a problem, it is necessary to discuss possible solutions with the patient (10).

In the study conducted by Aran et al., it was stated the elderly drivers safe driving skills problems have been identified, such as signal markers, use of the rear view mirror, regulation of vehicle operational parts according to the individual. These deficiencies in skills are thought to affect individual vehicle compliance and safe driving (11). In the study conducted by Diker et al., socioeconomic level, education level and quality of life were found to be directly related to worsening cognitive abilities. As the ratio of the geriatric population to the general population increases, the importance of preserving cognitive capacity also increases (12). In the study conducted by Bernardelli et al., the importance of gender, education and age with a lesser extent was associated with predicting cognitive function in the oldest elderly population, so the importance of cognitive reserve and successful aging was emphasized when evaluating the elderly population who can still drive (13). In the study conducted by Horikawa et al., a clear relationship between cognitive function tests, cognitive function performance, driver conditions and behaviors was not demonstrated, and it was emphasized that a more reliable system should be developed (14).

In the study conducted by Jovanovi et al., cardiovascular diseases were detected frequently in drivers, and people with diseases such as arterial hypertension, coronary artery disease, rhythm disorders, thromboangiitis obliterans cause traffic accidents more than healthy ones. These results again remind the importance of better health controls and periodic examination (15).

In the study conducted by Erim et al. , the effects of psychiatric drugs on the ability to drive were examined, and it was emphasized that pedestrians and drivers should be considered when prescribing drugs in the clinic, and that the driving skills of those who use psychiatric drugs periodically should be evaluated (16). In the study conducted by Cushman et al., it was emphasized that psychiatric patients did not cause a higher rate of single-vehicle accidents, did not violate the rules, and did not exceed the speed limits (17).

In the study conducted by Pek and Pınarcı, it is recommended that other substances that can be used by people other than alcohol should be examined in blood and urine tests in traffic accidents, and it is believed that the deterrence of the use of these substances will increase (18). In the study conducted by Aktas et al., it was stated that As in many studies with drivers in the literature, the most common use other than alcohol substance is marijuana (19). In the study conducted by Pascali et al., the use of cocaine and cannabinoids was determined the

most as psychotropic substances, it was emphasized that benzodiazepines were the most prescribed drugs, and the status of these drugs in terms of driving risk was evaluated and it was noted that this situation was not included in the legislation (20).

In a study conducted by Özdilek and Uç, it was stated in a study that a single physician's opinion was not sufficient in terms of driver's ability in parkinson's disease, it was stated that motor, visual and cognitive functions were important, and it was emphasized that patients could be evaluated by a driving rehabilitation specialist (21). In the study conducted by Papageorgiou et al., it was emphasized that a personalized approach should be applied by neurology and neuropsychology branches when making a decision about driving competency in Alzheimer's disease (22). In the study conducted by Topçuoğlu, the current situation of epilepsy patients in terms of driver's license in many countries was examined. It was stated that epileptics could not obtain a driver's license in many countries, including Turkey, and it was emphasized that this situation should be stated in the epileptic patient's certificate who applied for a driver's license (23). In the study conducted by Taylor et al. it wasn't suggested that taking antiepileptic drugs in any way increases the risks of any form of accident in a population of drivers with a history of epilepsy (24).

In the study conducted by Fırat, it was emphasized that the driver's license was temporarily withdrawn in diseases such as narcolepsy, which affect the consciousness state, and it was stated that decision to obtain a permanent driver's license could be made in those with chronic conditions and the response to some treatment is low (25). In the study conducted by Fattouch et al., a large number of epilepsy patients were examined with ambulatory EEG, and it was stated that this evaluation could be used in driver report applications (26). In the study conducted by Kurt et al., since approximately half of those over the age of 50 developed senile cataract the importance of performing periodic ophthalmological examinations in this age group was emphasized (27).

In the study conducted by Gislason et al. , it was emphasized that while single-vehicle accidents were detected more frequently in young people and men, they occurred in cases of alcoholism and falling a sleep (28). In a study conducted by Findley et al., it was emphasized in the study that individuals with obstructive sleep apnea syndrome cause too many preventable accidents due to falling asleep while driving (29). In the study conducted by Waller et al. , it was determined that alcohol, contrary to what is known, does not protect against injury in collisions and increases the risk of injury (30).

In the study conducted by Prasad et al. , among disabled drivers who returned to driving, those who used unusual practices instead of familiar ones found lower success and higher accident rates (31). In the study conducted by Sümer, it was pointed out that social norms should be formed for traffic safety culture which could be provided by education and transportation policies strengthened with effective control and intervention practices (32).

In the study conducted by Honkasalo et al. , it was stated that two-thirds of diabetics who use insulin, who occasionally show signs of hypoglycemia, have a driver's license, and it was added that this situation is incompatible with the legislation (33). In the study conducted by Brož et al., it was stated that patients using insulin or using a combination of insulin and OAD did not report serious hypoglycemia to the physician due to the high rate of fear of revocation of license, and it was emphasized that this situation led to insufficient information of the physician and thus inadequate treatment of the patient (34).

In a study conducted by Martin and Estevez, it was suggested that drivers can be divided into two profiles as those with high practical intelligence and fewer errors, high motor and cognitive performance, and those with more errors, low practical intelligence and low motor and cognitive performance. According to the study, the number and type of accidents during their first years of driving are related to the cognitive profiles of drivers assessed before they obtained their driving license (35).

In the study conducted by Hansotia and Broste, it was stated that the risk of traffic accidents is

higher for diabetics and epileptics than unaffected individuals, the risk increase was found to be less than in previous studies, and it was not large enough to require more restrictions (36).

In our study, it was determined that the participants who were referred to the upper branch were women with a high rate. The reason for this is thought that female participants applying for a medical report for driver's license may have a higher rate of additional diseases and thus a higher referral indication. While a low rate of restriction was observed among those who were referred, a higher rate and number of restrictions were observed among those who were not referred, and it is thought that the reason for this is related to this situation is stated in the driver's license health report without being referred by the physician in those who are found to be limited.

In our study, it was revealed that the number of people with additional disease among those who use ASM is relatively higher than the number of people with additional disease among those who do not use ASM. From this point of view, it can be thought that the participants with ASM use have repeated ASM applications due to chronic disease.

In our study, it was observed that the high rate of people applying for DLHR was between the ages of 18-34 and a high rate of university graduates. The rate of limitation was 18% in those who applied for DLHR, 18% had an additional disease, and nearly 15% had a history of medical drug use. These results draw attention to the health problems that may be encountered while preparing DLHR.

Since the study was single-centered and was conducted in a certain period, the results are limited to the characteristics of the region and the period, and cannot be reflected in general. It is possible to obtain more meaningful results with studies to be carried out in other centers, and it would be beneficial to deepen the anamnesis and to carry out more comprehensive studies that take into account the existing diseases in those who apply for DLHR.

CONCLUSION

Family Physicians should carefully evaluate the comorbidities and limitations of individuals when issuing DLHR. While some people applying for DLHR may prefer not to mention their additional diseases, others do not know about their current disease. The health problems declared in the Personal Health Declaration forms of the people applying for DLHR should be evaluated in detail, but the examinations should not be limited to these, a detailed anamnesis should be taken, the past medical records of the applicant should be examined, a detailed physical

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Dogo Argentino Irkı Bir Köpekte Görülen Viseral Leishmaniasisin Patolojik Bulguları

Canine Visceral Leishmaniasis, Pathological Findings in a Dogo Argentino Dog

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ABSTRACT

A six-year-old, Dogo Argentino male dog, which had been treated for Leishmaniasis for 6 months, was brought to Burdur Mehmet Akif Ersoy University Veterinary Faculty clinics with complaints of partial paralysis, vomiting, lethargy, anorexia and deterioration in general condition. Due to the death of the dog during the treatment, it was sent to the Department of Pathology for necropsy. Macroscopically; The live rand spleen was enlarged and had a granular surface. In the kidney, uroliths were found in the calyx renalis. Microscopically, multi focal granulomatous hepatitis, splenitis, focal myelitis and multifocal nonsuppurative glomerulonephritis were observed. Leishmania spp. Were detected cytoplasm of macrophages in the liver kidney,spleen and medulla spinalis with Giemsa staining. Biochemical analyzes of urolites were determined to be of xanthine origin. In this study, a case of visceral Leishmaniasis associated with Xanthine Urolithiasis in a Dog oargentino dog was examined with its clinical, macroscopic and microscopical findings in detail.

Keywords: Canine Leishmaniasis, Dogo Argentino, Pathology

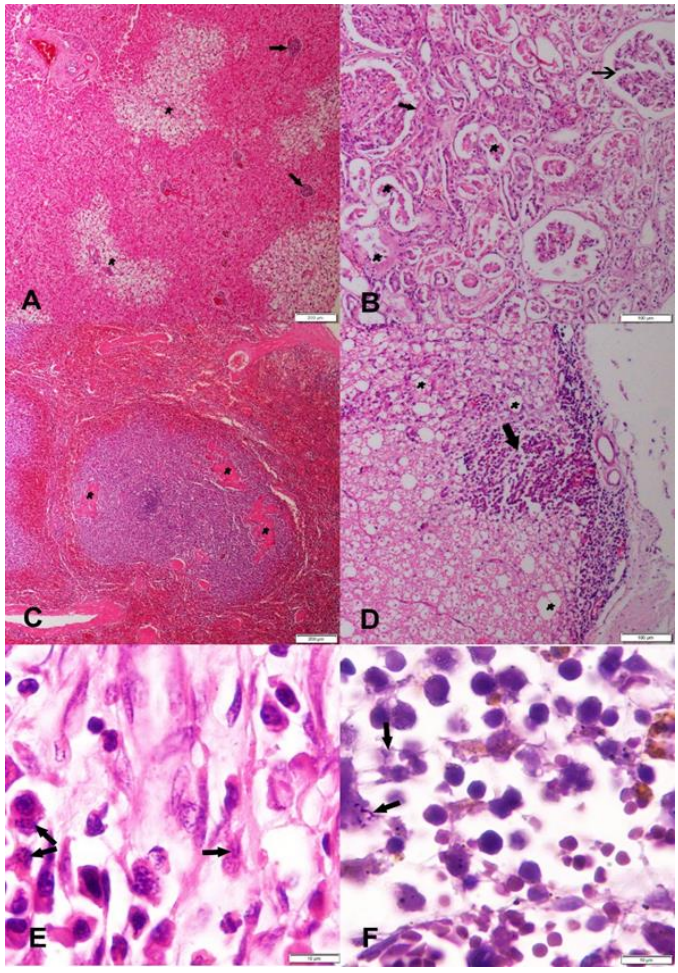
GİRİŞ

Leishmaniasis insan ve köpekler başta olmak üzere birçok memeli hayvanda Leishmania türlerinin neden olduğu protozoal bir hastalıktır.1 Bulaşma başta tatarcık türleri olmak üzere phlebotomus türleri ve Rhipicephalus türü keneler yardımı ile olur.2 Etken makrofajların içerisine yerleşir. Genel olarak makrofaj yıkımı etkenlerin çoğalması ve hareketleri ile olur. Parçalanan makrofajlardan çıkan etkenler dokulara yayılır.1

Köpeklerde hastalığın deri ve viseral formları tanımlanmıştır. Deri formunda kronik ülserler şekillenir. Visceral formda karaciğer simetrik olarak büyümüş olup koyu kırmızı-kahve renklidir ve yüzeyinde çok sayıda granulomlar bulunur.3 En belirgin lezyonlar dalakta gözlenir. Dalak 2-3 misli büyümüş olup kapsulası koyu kırmızı-siyah renklidir. Histopatolojik olarak birçok organda fokalgranulomlar şekillenir. Etkilenen organlarda, hücresel infiltrasyonlarla sonuçlanan yangısal proliferatif değişiklikler gözlenir.4 Tanı dalak, lenf düğümü ve kemik iliğinden alınan sitolojik örnekler ile histopatolojik örneklerde etkenin görülmesiyle yapılır.1

OLGU SUNUMU

Burdur Mehmet Akif Ersoy Üniversitesi Veteriner Fakültesi Kliniklerine Leishmaniasis şüphesiyle getirilen Dogo Argentino ırkı erkek bir köpekte, arka ayaklarda parsiyel paraliz, kusma, letarji ve anoreksi mevcuttu. Yapılan laboratuvar muayenelerinde belirgin anemi, metabolik asidozis ve idrarda proteinüri görüldü. İdrar kesesine yapılan sondalama sonrasında idrarda tortulara rastlandı. Biyokimyasal analizlerde bu tortuların ksantin ürolithiasis olduğu saptandı. Tedavi sırasında hayvanın ölmesi üzerine Patoloji Anabilim dalına gönderildi. Nekropside dalağın büyük olduğu ve margokraniyalisinde yüzeyden taşkın nodüler görünümde bir yapıya rastlandı. Böbreğin kesit yüzünde pelvisrenalise yerleşen 0,3 cm den 0,5 cm çaplarına değişen sarımtırak renkli ürolitlere rastlandı. Bu taşların temas ettikleri bölgelerde 1 cm çapına varan sarımsı yeşil renkli etrafı hiperemik nekrotik alanlara rastlandı. Son iki lumbal vertebra bölgesindeki medullaspinalis kısmı hiperemik ve ödemliydi. Nekropside alınan doku örnekleri %10'luk formaldehit solüsyonunda tespit edildi. Rutin doku takibinden geçirilerek parafin bloklara gömüldü. Bloklardan 5 µm kalınlığında kesitler alınarak rutin hematoksilen&eozin ve May-Grünwald Giemsa boyama yöntemleri ile boyandı. Histopatolojik incelemede karaciğerde multifokalgranulomatöz hepatitis ve hidropik dejenerasyon (Figür 1A), kronik diffuz nonsuppuratif glomerulonephritis (Figür 1B), splenitis (Figür 1C), fokal myelitis (Figür 1D) ve enteritis gözlendi. Böbrek, karaciğer, dalak, bağırsak, lenf folikülleri ve medulla spinalisteki yangısal alanlarda makrofajların içerisinde koyu mavi-siyah renkli yuvarlak veya ipliksi şekilli cisimciklere rastlandı (Figür 1E). Yapılan May-Grünwald Giemsa boyamasında bu cisimciklerin Leismaniasis'e ait gelişim formları ile ilişkili olduğu belirlendi (Figür 1F).



Figür 1. Lezyonların histopatolojik görünümü, H&E. A) Karaciğer, multfokalgranulomlar (Oklar) ve hidropikdejenerasyon (Yıldızlar), X40, 200 µm. B) Böbrek, Glomeruluslardamezengialproliferasyon ve bowman kapsüllerinde kalınlaşma (Kalın ok), bowman boşluğunda genişleme (İnce ok), tubul lümenlerinde dökülmüş epitel hücreleri ve proteinöz kitleler (YIldızlar), X100, 100 µm. C) Dalak, Follikül periferinde karakteristik hyalinize alanlar (Yıldızlar), X40, 200 µm. D) Medullaspinalis, Fokalnonsuppuratifmyelitis (Ok) ve demyelinizasyon (Yıldızlar) X100, 100 µm. E) Böbrek, makrofaj sitoplazmalarındaki etkenler (Oklar), X600, 10 µm. F) Medullaspinalis, makrofaj sitoplazmalarındaki etkenler (Oklar), May-GrünwaldGiemsa, X600, 10 µm.

TARTIŞMA VE SONUÇ

Canine leishmaniasis insan ve köpeklerde endemik olarak görülen zoonotik bir hastalıktır.1 Ülkemizde Akdeniz, Doğu ve Güneydoğu Anadolu bölgesinde bildirilen vakalar mevcuttur.5 Sunulan olguda hayvanın Antalya'da yaşaması coğrafik açıdan literatür verileriyle uyumluydu. Aynı zamanda bu olgu hala endemik vakalar halinde ülkemizde görüldüğünü belgeleyen bir rapordur.

Visceral Leishmaniasis'in karaciğer, dalak, böbrek, lenf düğümü ve kemik iliği gibi organları etkilediği birçok kaynakta bildirilmektedir. Son yıllarda yapılan çalışmalarda santral ve periferal sinir sistemini de etkilediği rapor edilmiştir. 6,7Bu olguların çoğunda moleküler teknikler yardımı ile L. Infantum' un sorumlu olduğu tespit edilmiştir.8 Sunulan olguda bahsi geçen organlar haricinde lumbal bölgedeki medullaspinalis kısmında da Leishmaniasise ait lezyonların tespit edilmesi ilgi çekicidir. Ancak tür tayini yapılamadığından bu olgudaki etkenin L. Infantum olup olmadığı belirlenememiştir.

Leismaniasis'te böbrek lezyonları intersitiyumdaki multifokal mononüklear hücre infiltrasyonları ile başlayıp uzun süren olgularda fibrozis ve kronik böbrek yetmezliği ile sonuçlanabilmektedir.9 Bazı kaynaklarda tedavi sırasında kullanılan allopurinolun ksantin taşlarının oluşumuna neden olabileceği belirtilmiştir10. Sunulan olguda böbrek korteksi ve medullasında makroskobik olarak basınç nekrozları oluşturan ksantin taşlarının enfeksiyona bağlı böbrek yetmezliği yoksa visceral leishmaniasis tedavisi nedeniyle mi olduğu konusunda net bulgulara ulaşılamamıştır.

Sonuç olarak 6 yaşlı dogo argentino bir köpekte canine visceral leishmaniasis klinik, makroskobik ve mikroskobik bulgular eşliğinde ayrıntılı olarak sunulmuştur.

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