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**TAM
METİN /
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TAM METİN/FULL TEXT 1.

CASE REPORT/OLGU SUNUMU

Kliniğimizden Olgu Sunumu: Sezaryen Sonrası Cilt Altı Endometriozis Gelişmiş İki Olgunun Operasyonu

Case Report of our Clinic: Operation of Two Subcutaneous Endometriosis Experience After Caesarean Section

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ABSTRACT

When endometrial tissue (stroma or glands), is located out of uterus it is called endometriosis. Dysmenorrhea, dyspareunia, chronic pelvic pain are common symptoms of endometriosis¹. However, subcutaneous or Rectus muscle located endometriosis are able to present after caesarean section. Other extreme locations could be nasal mucosa or lungs. Aim of this presentation is endometriosis could be presented various complaints (nasal hemorrhage, hemoptysis) because of this variable locations. We reached our index cases when they came to our clinic with palpable subcutaneous mass. They were fertile young women and their complaints developed after having caesarean birth. Endometriosis could be presented in unusual ways. Increasing cesaerean birth rates are effected this situation in bad ways,too. Endometriosis tissue is also invasive tissue so that it does not present in limited areas. We must care diagnosis and treatment of endometriosis.

Keywords: subcutaneos endometriosis, palpable mass, cesaerean sectio

ÖZET

Endometrium dokusunun, uterus dışında görülmesine endometriozis adı verilir. Dismenore, kronik pelvik ağrı, disparanü şikayetleri ile prezente olması tipiktir¹. Ancak sezeryan sonrasında cilt altı ya da rektus yerleşimli endometriosis, nazal dokularda endometriosis, akciğerde endometriosis gibi farklı lokalizasyonlarda olabilmektedir. Bu vaka sunumunda amaç farklı yerleşim yerinde farklı şikayetlerle (burun kanaması, hemoptizi) prezente olabilen endometriosis'e dikkat çekmektir.

İndeks vakalarımıza cilt altında ele gelen kitle şikayeti ile kliniğimize başvurmaları sayesinde ulaşıldı. Her iki hastamızda fertilité çağında genç hastalardı. Sezaryenle doğum sonrasında şikayetlerinin geliştiğini belirttiler. Endometriosis alışılmadık bir şikayetle prezente olabilir. Artan sezeryan doğum oranlarının bu konuda göz ardı edilmez olumsuz katkısı mevcuttur. Endometriosis dokusu invaziv ilerler ve bulunduğu lokasyonda sınırlı kalmaz. Endometriosis tanısına ve tedavisine özen gösterilmelidir.

Anahtar Kelimeler: cilt altı endometriosis, ele gelen kitle, sezaryen

INTRODUCTION

It is named as endometriosis when endometrial tissue is located out of uterus. The primary symptom of endometriosis is pelvic pain, often associated with menstrual periods. Pain may increase over time². Because endometriosis is known as one of the chronic and inflammatory diseases. Its typical locations are well known.

Herein, we aim to report two atypically located subcutaneous endometriosis case which might be caused iatrogenic way. It is known that endometriosis may be presented after laparotomy, amniocentesis or caesarean section.

CASE REPORT

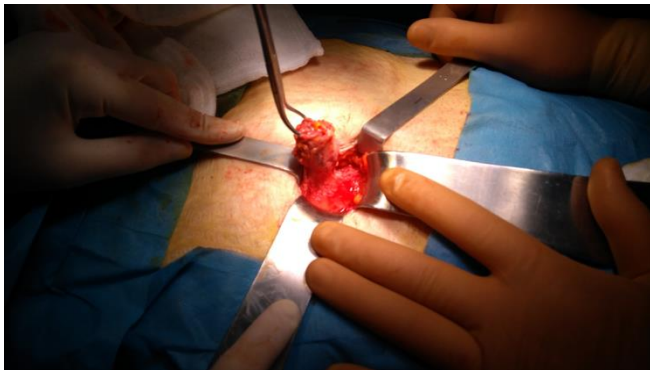
Case 1

Twenty eight year-old woman appealed to our clinic with pain and palpable mass above caeseraen section(C/S) scar. It was her second C/S operation, there is no significant history such as illness, medicine or cigarette, alcohol consumption. She had C/S operation 20 months ago and signified that her pain increased day by day. In physical examination it is found that 2 centimeter (cm) semi-mobile mass over 3 cm right corner of C/S scar. Ultrasonography(USG) defines there

is 3 cm mass under 2 cm of skin, may be agreeable endometrioma. Operation is elected by talking with patient. It is told that endometrioma/ endometriosis is repetitious.

Operation is started by using old C/S scar. We aimed to take off endometrioma (endometriosis cyst) under skin but when the mass was reached, it is understood that this is not a simple mass because it continued throug scarpa facia and rectus muscles. With patience, tissues were excised slowly and root of the mass totally excised from rectus muscles. After excision mass first scarpa facia was repaired then subcutaneous and the skin closed firmly. Operation was completed successfully and the pathology report was agreed on endometriosis.

Figure1. It is not an ordinary subcutaneous endometrioma, Scarpa invasion is seen here.



Case 2

Thirty three year-old woman, Gravida2, Livebirth2 she had her last C/S birth 5 years ago, she has no other spesific history appealed to our clinic painful and palpable mass close to C/S scar. She told ‘ I feel like having C/S birth every menstruel period for 5 years!’. Physical examination she had semimobile mass on the left corner of C/S scar. When USG is practised 43x40 milimeter (mm) mass is seen under 7 mm of the skin, agreeable to endometrioma. She was informed about operation and she decided operation.

Her operation was similar to Case 1, endometrioma tissue was invaded under scarpa fascia and same excision was practised. Abdominal layers were closed anatomically. Her pathology report was agreed with endometriosis, too. After operation healing period was completed, she reported that her painful periods ended.

Figure2. After excision of endometrioma, it is seen spotting bleeding focuses in the middle of the mass.



DISCUSSION

Endometriosis could be presented in unusual ways. Subcutaneous palpable mass is one of the way of unusual way. Scar endometriosis is a known entity and any patient presenting with swelling and cyclical pain in a caesarean scar area is pathognomonic of scar endometriosis³. Incidence of surgical scar endometriosis is 0.03–0.04%.⁴

Increasing cesaerean birth rates might be a reason of subcutaneous endometriosis. We must care diagnosis and treatment of endometriosis. Endometriosis tissue is also invasive tissue so that it does not present in limited areas.

This case highlights the following: We should bear in mind endometriosis is one of the diseases which we may be face to face various clinical presentation. Increasing laparotomy or any other surgical interventions are one of the the reasons of increasing subcutaneous endometriosis.

Conflict of Interests: The authors declare no conflict of interests.

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TAM METİN/FULL TEXT 2.

RESEARCH ARTICLE / ARAŞTIRMA MAKALESİ

Sebebi Bilinmeyen Nedenli Ateşli Enfeksiyöz ve Non-enfeksiyöz Hastalarda Komorbid Hastalıkların Karşılaştırılması

The Comparison of Comorbids in Infectious and Non-Infectious Patients with Fever of Unknown Origin

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Özet

Amaç: Herhangi bir nedenle yatan hastalarımızda enfeksiyon ya da enfeksiyon dışı ateşi olan hastalarda eşlik eden komorbidlerin dağılımını incelemeyi amaçladık.

Materyal ve Metod: Çalışma Sakarya Üniversitesi Tıp Fakültesi Eğitim ve Araştırma Hastanesi (SÜEAH) iç hastalıkları kliniğine son 5 yıl içerisinde sebebi bilinmeyen ateş nedeniyle yatırılan hastalarda retrospektif olarak dosya taranarak klinik ve laboratuvar verileri kayıt altına alındı. Çalışmaya ateşi olup kan kültürü alınan hastalar alındı. Hastaların aldıkları antibiyoterapiler, komorbid hastalıkları retrospektif dosya verilerinden çıkarıldı. Kullandıkları ilaçlar kaydedildi. Çalışma verileri MS excel dosyasına alındıktan sonra SPSS 15 versiyon ile istatistik verileri hesaplandı. $p < 0.05$ altında olanlar anlamlı kabul edildi.

Çalışma, Sakarya Üniversitesi Tıp Fakültesi Etik Kurulu tarafından onaylandı (71522473/050.01.04/47).

Bulgular: Çalışmaya 501 hasta alındı. 325 hasta non-enfeksiyöz (grup I) 176 hasta enfeksiyöz grupta (Grup II) idi. Grup I/Grup II karşılaştırıldığında 113/82 diyabetes mellitus, 79/39 hematoloji dışı malignite(HDM), 67/16 anemi, 61/44 kronik böbrek yetmezliği(KBY) , 52/38 hipertiroidi, 26/19 serebrovasküler hastalık(SVH), 22/4 gastrointestinal sistem kanaması,16/6 hematolojik malignite(HM), 12/2 pankreatit, 11/2 subklinikhipotiroidi, 10/2 ilaç intoksikasyonu, 5/2 romatoid artrit(RA), 3/4 diyabetik ketoasidoz(DKA), 3/0 myokard infarktüsü(MI), 3/0 sistemik lupus eritematosus(SLE), 2/0 gut, 2/0 vaskülit, 2/0 epilepsi, 2 pulmoner tromboemboli(PTE), 2 inflamatuvar barsak hastalığı(IBH), 1/0 erişkin still hastalığı(ESH), 1/0 ailesel akdeniz ateşi(FMF), 1/0 Behçet, 1/0 sarkoidoz, 1/0 dermatoyozit, 1/0 adrenal yetmezlik, 0/1 hemolitik üremik sendrom(HUS), 1/0 immün trombositopenik purpura(ITP) olarak bulundu.

Tartışma: En fazla non enfeksiyöz sebep Diyabetes Mellitus, Hematoloji dışı maligniteler(HDM) ve anemi idi. Enfeksiyöz hastalarda ise en fazla komorbidler diyabetes mellitus, KBY ve HDM idi. Diyabetes Mellituslu hastalarda ateş hem enfeksiyöz hem de non enfeksiyöz tablolarda sık görülen bir komorbiditedir. Diyabetes Mellitus ve KBY enfeksiyonun en sık görüldüğü komorbidlerdir. Bu hastaların aşılmasına önem verilmesi gerektiği düşünülmüştür.

Anahtar kelimeler: Nedeni bilinmeyen ateş, Komorbid hastalılar, Enfeksiyon

Abstract

Aim: We aimed to investigate the distribution of comorbidities in patients with infectious or non-infectious fever in our patients hospitalized with any reason.

Methods: The study was performed retrospectively and the clinical and laboratory data of the patients who were admitted to the internal medicine clinic of Sakarya University Training and Research Hospital (SUTRH) due to fever of unknown origin in the last 5 years were recorded. Patients who had fever and blood culture were included in the study. Antibiotherapies and comorbid diseases were taken from retrospective data. The drugs they used were recorded. After the data were transferred to MS excel file, statistical data were calculated with SPSS 15 version. P <0.05 was considered significant.

The study was approved by Sakarya University Faculty of Medicine Ethics Committee(71522473/050.01.04/47).

Results: The study included 501 patients. 325 patients were non-infectious (group I) and 176 were in the infectious group (Group II). When Grup I/Grup II compared, it was found that; 113/82'ü diabetes mellitus, 79/39 non-haematological malignancies(NHM), 67/16 anemia, 61/44 cronic renal failure(CRF), 52/38 hyperthyroidism, 26/19 cerebrovasculer diseases(CVD), 22/4 gastrointestinal systems hemoragy, 16/6 haematological malignancies (HM), 12/2 pancreatitis, 11/2 subclinical hypothyroidism, 10/2 drug intoxication, 5/2 rheumatoid arthritis(RA), 3/4 diabetic ketoacidosis(DKA), 3/0 myocard Infarctüs (MI), 3/0 systemic lupus erytematosus(SLE), 2/0 gout, 2/0 vasculitis, 2/0 epilepsy, 2 pulmonary thromboemboli(PTE), 2 inflammatory bowel disease (IBD), 1/0 adult onset still's diseases(AOSD), 1/0 familial mediterranean fever(FMF), 1/0 Behçet disease, 1/0 sarcoidosis, 1/0 dermatoyositis, 1/0 adrenal insufficiency, 0/1 hemolytic uremik syndrom(HUS), 1/0 immune thrombocytopenic purpura(ITP).

Discussion:

The most non-infectious causes were diabetes, non-hematological malignancies and anemia. In infectious patients, the most common comorbidities were diabetes mellitus, cronic renal failure(CRF) and non-hematologic malignancy(NHM). Fever in patients with diabetes mellitus is a frequent comorbidity in both infectious and non-infectious cases. Diabetes mellitus and CRF are comorbidities which the infections are seen most frequently. It is thought that the vaccination of these patients should be given importance.

Key words: Fever of Unknown origin, Comorbidity, Infection

Sebebi Bilinmeyen Nedenli Ateşli Enfeksiyöz ve Non-enfeksiyöz Hastalarda Komorbid Hastalıkların Karşılaştırılması

Giriş: Nedeni bilinmeyen ateş (NBA) ilk kez Petersdorf ve Beeson tarafından 1961 yılında tanımlanmıştır. Klasik NBA, ateşin 38.3°C'nin üzerinde olması, sürenin üç haftadan uzun olması ve bir haftalık hastane araştırmasına rağmen nedenin belirlenememesi olarak tanımlanır. ^[1]. Daha sonra Durack ve Street NBA'i ; Petersdorf ve Beeson tarafından orijinal olarak tanımlanan klasik FUO, nozokomiyal FUO, nütropenik FUO ve HIV ile ilişkili FUO olmak üzere dört sınıfa ayırmışlardır. Durack ve Street, bir vakayı FUO olarak sınıflandırılmadan önce, üç ayakta tedavi ziyareti veya üç günlük hastane içi soruşturmanın minimum tanısal değerlendirmesini önermiştir

[2]. Mevcut literatür klasik FUO nedenlerinin dört ana etiyolojik kategoride sınıflandırılmasını önermektedir: enfeksiyonlar, neoplazmalar, enfeksiyöz olmayan enflamatuar hastalıklar(kollojen doku hastalıkları, vaskülitler v.b.) ve çeşitli durumlar.

NBA değerlendirilmesinde önemli olan iyi bir öykü almak ve hastayı tekrar değerlendirmektir. Daha çok, sık rastlanan hastalıkların atipik belirtilerle ortaya çıkmasına bağlıdır. Özellikle semptomların lokalizasyonu, süresi, eşlik eden durumlar, seyahat, hayvan teması, immünsüresyon durumu, ilaç ve intoksikasyon durumu, antibiyotikler sorgulanmalıdır. NBA tanısal yaklaşımda özellikle altta yatan hastalık tespit edilmelidir. Bunun için her ne kadar spesifik testler yapılması gerekse de tanıya ulaşmak için için oldukça fazla gereksiz testler yapılmaktadır. Mümkün olduğunca gereksiz testlerden kaçınılmalıdır.

Bizim bu çalışmadaki amacımız, herhangi bir nedenle iç hastalıkları kliniğimize yatan hastalarımızda enfeksiyon ya da non-enfeksiyöz ateşi olan hastalarda eşlik eden komorbidlerin dağılımını incelemeyi amaçladık.

Metod: Çalışma Sakarya Üniversitesi Tıp Fakültesi Eğitim ve Araştırma Hastanesi (SÜEAH) iç hastalıkları kliniğine son 5 yıl içerisinde sebebi bilinmeyen ateş nedeniyle yatırılan hastalarda retrospektif olarak dosya taranarak klinik ve laboratuvar verileri kayıt altına alındı. Çalışmaya ateşi olup kan kültürü alınan hastalar alındı. Hastaların aldıkları antibiyoterapiler, komorbid hastalıkları retrospektif dosya verilerinden çıkarıldı. Kullandıkları ilaçlar kaydedildi. Çalışma verileri MS excel dosyasına alındıktan sonra SPSS 15 versiyon ile istatistik verileri hesaplandı. $p < 0.05$ altında olanlar anlamlı kabul edildi.

Çalışma, Sakarya Üniversitesi Tıp Fakültesi Etik Kurulu tarafından onaylandı (71522473/050.01.04/47) .

Bulgular: Çalışmaya 501 hasta alındı. 325 hasta non-enfeksiyöz (grup I) 176 hasta enfeksiyöz grupta (Grup II) idi. Grup I/Grup II karşılaştırıldığında 113/82 diyabetes mellitus, 79/39 hematoloji dışı malignite(HDM), 67/16 anemi, 61/44 kronik böbrek yetmezliği(KBY) , 52/38 hipertiroidi, 26/19 serebrovasküler hastalık(SVH), 22/4 gastrointestinal sistem kanaması,16/6 hematolojik malignite(HM), 12/2 pankreatit, 11/2 subklinikhipotiroidi, 10/2 ilaç intoksikasyonu, 5/2 romatoid artrit(RA), 3/4 diyabetik ketoasidoz(DKA), 3/0 myokard infarktüsü(MI), 3/0 sistemik lupus eritematosus(SLE), 2/0 gut, 2/0 vaskülit, 2/0 epilepsi, 2 pulmoner

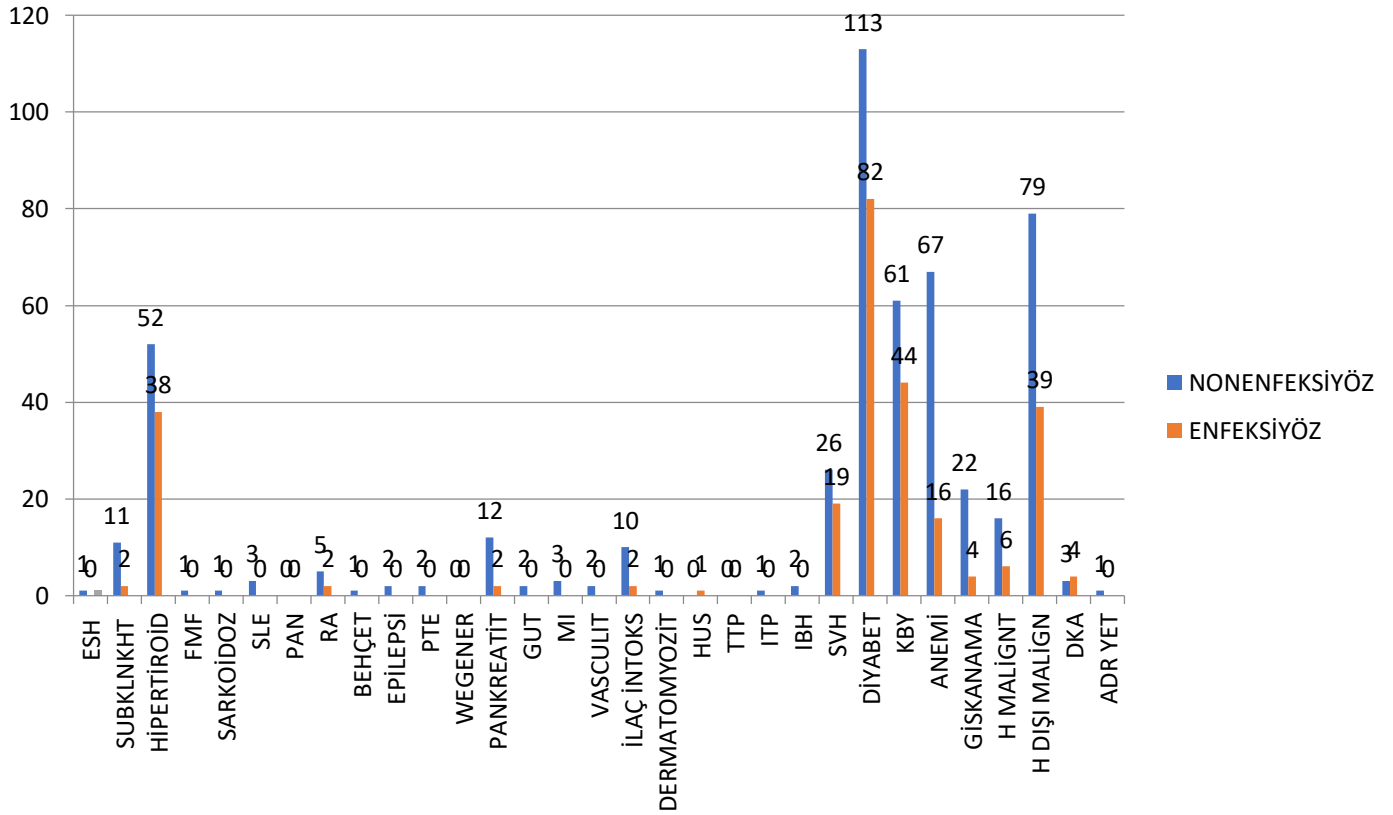
tromboemboli(PTE), 2 inflamatuvar barsak hastalığı(IBH), 1/0 erişkin still hastalığı(ESH), 1/0 ailesel akdeniz ateşi(FMF), 1/0 Behçet, 1/0 sarkoidoz, 1/0 dermatoyozit, 1/0 adrenal yetmezlik, 0/1 hemolitik üremik sendrom(HUS), 1/0 immün trombositopenik purpura(ITP) olarak bulundu.

Tablo 1: Enfeksiyöz ya da non-enfeksiyöz ateşli hastalarda tanılar

TANILAR	Grup 1 (n=325)	Grup 2 (n=176)	p
Diabetes Mellitus	113	82	0,01
Kronik Böbrek Hastalığı	61	44	0,10
Hipertiroidi	52	38	0,14
Anemi	67	16	0,001
Hematoloji dışı malignite	79	39	0,65
Gis kanama	22	4	0,03
Serebro Vazküler Hastalık(SVH)	26	19	0,32
Hematolojik Malignite	16	6	0,50
Pankreatit	12	2	0,15
Subklinik Hipotiroidi	11	2	0,15
İlaç intoksikasyonu	10	2	0,23
Pulmoner Tromboemboli(PTE)	2	0	0,54
Wegener Granulomatozus	0	0	-
Gut	2	0	0,54
Myokard Enfarktüsü(MI)	3	0	0,55

Tablo 2: Enfeksiyöz ya da non-enfeksiyöz ateşli hastalarda tanılar

	Grup 1	Grup 2	p
TANILAR	(n=325)	(n=176)	
Vaskülit	2	0	0,54
Behçet Hastalığı	1	0	1
Dermatomiyozit	1	0	1
Hemolitik Üremik Sendrom(HÜS)	0	1	0,35
Trombotik Trombositopenik Purpura(TTP)	0	0	-
İmmün Trombositopenik Purpura(ITP)	1	0	1
İnflamatuvar Barsak Hastalıkları(IBH)	2	0	0,54
Peri Arteritis Nodoza(PAN)	0	0	-
Erişkin Still Hastalığı(ESH)	1	0	1
Epilepsi	2	0	0,54
Familial Mediterranean Fever(FMF)	1	0	1
Sistemik Lupus Eritematozus(SLE)	3	0	0,55
Romatoid Artrit(RA)	5	2	1
Sarkoidoz	1	0	1
Diyabetik Ketoasidoz(DKA)	3	4	0,24
Adrenal yetmezlik	1	0	1

Grafik-1: Ateşi olan enfeksiyöz ve non-enfeksiyöz hastalarda genel veriler

Tartışma: NBA'ya neden olan hastalıklar coğrafi bölgeye, hastanın yaşına, sağlık hizmetlerine ulaşma kolaylığına, ülkenin sosyoekonomik durumuna göre değişmektedir[3]. NBA etiyojisinin bulunması hikaye, fizik muayene, laboratuvar ve radyolojik değerlendirmelerden elde edilen sonuçların değerlendirilmesini içerir. NBA'te altta yatan hastalığı teşhis edebilmek için basamak tanısallık testler uygulanmalıdır[4]. İlk başlangıçta; Hemogram, periferik yayma, rutin biyokimyasal tetkikler, idrar analizi, kan kültürü, akciğer grafisi, idrar kültürü, abdominopelvik ultsanografi, bölgenin epidemiyolojik özelliklerine göre enfeksiyon serolojisi, birinci basamakta; ESH(Eritrosit sedimantasyon hızı), CRP(C-reaktif protein), RF(Romatoid faktör), ASO(anti-

streptolisın O), CMV(sitomegalovirüs) IgM, EBV(epstain bar virüs) IgM, HBsAg(hepatit B yüzey antijeni, CK(kreatin kinaz), ANA(antinükleer antikor), ds-DNA, TSH(tiroid stümulan hormon), PPD(purifiye protein derivesi), Brusella aglutinasyonu, Salmonela aglutinasyonu, gayta ve balgam kültürü, balgam ve gayta mikroskobisi, balgamda AARB(asit alkole dirençli basil), ikinci basamakta; Serum protein elektroforezi, ACE(angiotensin dönüştücü enzim), ANCA(anti nükleer sitoplazmik antikor), IgG, IgA, IgM, ENA(ekstrakte edilebilir nükleer antijen) paneli, C3, C4, kriyoglobulin , T3, T4, Mikoplazma-Toksoplazma- Treponoma-Yersinia hücre kültürleri, lenf nodu biyopsisi ve kültürü, karaciğer biyopsisi, kemik iliği biyopsisi, temporal arter biyopsisi, tiroid biyopsisi, 24 saatlik idrarda VMA(vanilmandelik asit, tiroglobulin , antimikrozomal antikor, PSA(prostat spesifik antijen), HIV(insan immünyetmezlik virüsü), HCV(hepatit C virüs), plazma kortizolü, ekokardiyografi, abdomino-pelvik BT(bilgisayarlı tomografi), toraks BT, rektosigmoidoskopi, baryum enema, sinus grafisi, diş muayenesi, fundus muayenesi, lökosit sintigrafisi, üçüncü basamakta; Tüm biyopsiler, laparoskopi, laparotomi, endoskopik inceleme gibi tüm invaziv işlemler uygulanabilmektedir [5], [6], [7]

Hayakawa ve arkadaşlarının, NBA ile ilgili 2000-2011 yılları arasında farklı ülkelerde yapılmış olgu serilerini kapsayan derlemesine göre 2628 NBA olgusunun etyolojik dağılımında, sıklık sırasıyla enfeksiyonlar, tanı konulamayanlar, enfeksiyon dışı inflamatuvar hastalıklar ve maligniteler olarak bulunmuştur. Gelişmekte olan ülkelerde enfeksiyöz nedenler (tüberküloz, tifoid ateş, malarya, anaerobik karaciğer apsisi gibi) yüksek oranda görülür [8], [9].

Birçok seride enfeksiyon hastalıkları %25- 65 oranıyla en sık karşılaşılan NBA nedeni olarak saptanmıştır [3]. Kollajen vasküler hastalıklar arasında erişkin Still hastalığı en sık NBA nedeni olan hastalık olarak bildirilmektedir[10]. SLE, nadir görülen NBA nedenleri arasındadır. Farklı çalışmalarda SLE'nin NBA hastaları arasındaki oranı %1-2 olarak bildirilir [4]. NBA hastalarında tüm çabalara rağmen bir grup hastada ateş nedeni ortaya konulamamaktadır. Yaşlılarda NBA etyolojisinde gençlerden farklı olarak enfeksiyon ve malignite sıklığının arttığı bilinmektedir. Malignite kaynaklı NBA'lar içerisinde hem Hodgkin hem de non-Hodgkin lenfomalar en sık nedenlerden biri olarak bildirilmişti [11]. Solid tümörlerde de ateş görülebilmekle birlikte NBA etyolojisinde sık bildirilmemektedir[4]. Çalışmamızda en fazla non enfeksiyöz sebep diyabetes mellitus, hematoloji dışı maligniteler(HDM) ve anemi idi.

Enfeksiyöz hastalarda ise en fazla komorbidler diyabetes mellitus, KBH(Kronik Böbrek Hastalıkları) ve HDM idi. Diyabetes mellituslu hastalarda ateş hem enfeksiyöz hem de non enfeksiyöz tablolarda sık görülen bir komorbiditedir. Diyabetes mellitus ve KBY enfeksiyonun en sık görüldüğü komorbidlerdir. Bu hastaların aşılmasına önem verilmesi gerektiği düşünülmüştür.

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TAM METİN/FULL TEXT 3.

REVIEW ARTICLE

How can the use of CRISPR/Cas9 method revolutionize cancer treatment?

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Abstract

Cancer is the second most common disease in humans with a rising incidence; therefore innovative technologies that have been developed in recent years besides classical treatment methods are also important for us. Genotyping tumor changes will be adaptable in treating different types of cancer in the future. These innovative technologies are made possible by the elucidation of tumor biology. Among these technologies CRIPR/Cas9 (clustered regularly interspaced short palindromic repeats/ CRISPR associated protein 9) has an important place in genetic researches in the recent years. In this review I will briefly explain the mechanisms behind CRISPR/Cas9 technology and focus in the most recent usage of CRISPR/Cas9 in the treatment of different types of cancer. For this review I choose to investigate CRISPR/Cas9 in different types of cancer such as Bladder carcinoma, Breast Cancer, Cervical Cancer, Hepatocellular Carcinoma, and Osteosarcoma. This review includes information about CRISPR/Cas9 mechanism and it's relation with each of the cancers mentioned before, the off target effects, immune reactions and the solutions to them are included.

Key words: Oncology, CRISPR/Cas9, bladder cancer, breast cancer, cervical cancer, hepatocellular carcinoma, osteosarcoma

Contents

1. Basic principles of CRISPR/Cas9 technology
2. The uses of CRISPR/Cas9 technology against cancer
3. Off target effects, immune reactions of CRISPR/Cas9 and solutions
4. Conclusions

1. Basic principles of CRISPR/Cas9 technology: CRISPR/Cas9 is an immune mechanism used among bacteria and archaea against plasmid transfer and phage infection, as part of the adaptive immunity; it was first discovered in *E. coli* and was named after the repeat sequences that were interrupted by spacer sequences.^{1, 2} Repeats are regularly arranged and between each pair of repeats uniform sequences with constant sizes called spacers are located.² This technology is mainly used in understanding genetic background of diseases, elimination of gene mutations that can cause diseases, activation of tumor suppressor genes, inactivation of oncogenes.¹ The main difference between CRISPR/Cas9 and other DNA editing techniques such as ZNF (Zinc Finger Nucleases) and TALENs (Transcription Activator Like Effector Nucleases) is that CRISPR/Cas9 recognizes DNA not by proteins but by a short recognition sequence made up of 20 nucleotides.^{1, 2} Cas9 protein forms a complex with a single strand guide RNA. A short genomic sequence made up of 2 to 5 base pairs called PAM (Protospacer Adjacent Motif) is recognized by Cas9 protein and guide RNA complex. This complex attaches to the genomic DNA sequence close to PAM.³ After binding to the DNA CRISPR technology is capable of creating double strand breaks. According to the cell cycle phase these breaks can be repaired by nonhomologous end joining (NHEJ) or homology directed repair (HDR). Compared to classical methods CRISPR/Cas9 is very useful in genome engineering because it is simple, precise and highly efficient.⁴

2. The uses of CRISPR/Cas9 technology against cancer

According to the global health statistics cancer is the second most common disease in humans and its incidence is rising.^{5, 6} There are several methods that are used in cancer treatment such as surgical treatments, radiotherapy, chemotherapeutic drugs, hormonotherapeutic drugs, monoclonal antibodies.⁷ A very exciting progress has been reached in understanding and treating cancer by the study of genes, their activity and genetic abnormalities. Genotyping tumor changes will be adaptable in treating different types of cancer in the future. These innovative technologies are made possible by the elucidation of tumor biology.^{8, 6} One of the most exciting genome

editing methods is CRISPR/Cas9 technology, which is used to activate or repress the expression of a variety of genes in many organisms.^{1,6}

Bladder Cancer is the third most common cancer in men and seventeenth in women.^{9,10} Risk factors include use of tobacco¹¹, family history of bladder cancer¹², genetic mutations in genes such as TP53, RB1, FGFR, PIK3CA, HRAS, KRAS, and TSC1¹³. Yunchen Liu et al. constructed AND gate circuit (digital logic gate with two or more inputs and one output that performs logical conjunction) based on CRISPR/Cas9 system for targeting human bladder cancer cells and used the hTERT and hUP II promoters as the two input devices. The circuits effectively inhibited bladder cancer cell growth, induced apoptosis and decreased cell motility by regulating the corresponding gene in vitro.^{14,15} Another research made by Shuai Zhen et al. showed that lncRNA Urothelial Carcinoma Associated-1 helps the progression of bladder cancer. Therefore they designed gRNAs specific to UCA1 and constructed CRISPR/Cas9 systems targeting UCA1. With the use of this mechanism the cell cycle was arrested at G1 phase, there was an increase in apoptosis and an increase in MMP (matrix metalloproteinase) responsible for extracellular matrix degradation.¹⁶

Breast Cancer is the most common cancer in women globally; based on histopathological and molecular features its metastatic forms have worse prognosis.¹⁷ Breast cancers that are positive for ER or HER2 receptors are treated with endocrine treatment, which lowers the level of hormones that are released because of the signals received from the receptors or directly inhibits the receptors. In some cases drug resistance can occur because of mutations such as D538G Mutation in Estrogen Receptor.^{18,19} In treating breast cancer CRISPR/Cas9 can be used to create a dominant negative mutation targeting the HER2 or ER, thereof inhibiting proliferation of breast cancer cells. In treating drug resistance in breast cancer sgRNA will guide the Cas9 enzyme to the mutated exon of ER or HER2 and the mutation will be repaired by Cas9. Another application of CRISPR/Cas9 in breast cancer treatment is by blocking cellular events of cancer cells. Just like any other cell, cancer cells depend in many cellular events such as transcription, splicing, translation, protein folding/degradation, and cell proliferation.²⁰

According to the WHO statistics cervical cancer makes up to 6, 6% of all cancer in females. It is the fourth most frequent cancer in women.²¹

More than 90% of invasive cervical cancers are caused by high risk human papilloma virus (HR-HPV) such as types 16 and 18. In regulating viral replication and viral cell cycle an early region of HPV genome (E) plays an important role, on the other hand a late region codes two open reading frames called L1 and L2 forms the viral capsid. In carcinogenesis viral DNA plays a crucial role because it becomes part of the host's genome and viral oncogenes that are continuously expressed inactivate tumor suppressor genes such as p53, RB. This process can cause genomic instability and accumulation of somatic mutations that lead to cancer. According to Zhen, S., et al. the application of CRISPR/Cas9 demonstrated reduced cancerous growth in vivo.^{22,23} The main target of CRISPR/Cas9 is the promoter and open reading frame of E6 and E7 transcripts, it reduces E6 and E7 mRNA level and increases p53 level also induces apoptosis.²⁴ Also CRISPR/Cas9 transfected cancer cells demonstrated reduced growth in vivo because this mechanism has the ability to arrest cell cycle and lead to cancer cell death.²⁵

Hepatocellular Carcinoma is the primary malignancy of the liver and it is related to chronic infection with hepatitis B.²⁶ Song et al. used CRISPR/Cas9 system to eliminate HbsAg in hepatocellular carcinoma cell lines, they came to the conclusion that in contrast to HbsAg overexpression, HbsAg knockout inhibited proliferation and growth rate of hepatocellular carcinoma. HbsAg knockout is reached by disruption of open reading frame preS1/preS2/S, and according to the results the production of HbsAg was suppressed. The suppression was higher when sgRNA targeted the preS1 and preS2 regions.²⁷

The most common malignant tumor of bones is osteosarcoma.²⁸ In 30% of cases even aggressive chemotherapy doesn't prevent progression and metastasis. Yunfei Liao et al. applied CRISPR/Cas9 technology in osteosarcoma cell lines and targeted PD-L1 gene that codes PD-L1 protein at the DNA level. The role of PD-L1 is to prevent the damage that immune system may cause to nonharmful cells, but some cancer cells express PD-L1 which sends inhibitory signals to the immune system and prevents it from attacking these cancerous cell lines. Yunfei Liao et al. in their in vitro experiments created a 3D cell culture, and observed the growth and tumorigenicity of osteosarcoma cell lines such as KHOS and MNNG/HOS formed by PD-L1 CRISPR/Cas9 modification compared to controls. They came to the conclusion that PD-L1 CRISPR/Cas9 suppressed sphere formation both in KHOS PD-L1 CRISPR/Cas9 and MNNG/HOS PD-L1 CRISPR/Cas9 cells in three-dimensional culture.²⁹

3. Off target effect, immunotoxicity of CRISPR/Cas9 and solutions Technologies such as TALENS, Zinc finger nucleases, CRISPR/Cas9 that use engineered nucleases create double strand breaks in target DNA, which is then repaired by one of two pathways: NHEJ (non homologous end joining) or HDR (homology directed repair).³⁰ Sometimes these complexes bind to DNA outside of the target sequence, and cause genetic mutations such as point mutations,³¹ deletions, insertions,³² inversions,³³ and translocations³⁴ caused by double strand breaks out of target sequence. Fortunately off target effects can be overcome; Xiao et al designed a tool called CasOT that could find potential off target effect sites.³⁵ Also the use of a mutant form of Cas9 in pairs called Cas9 nickase can make this tool target specific, because nickases generate paired breaks in each DNA strand and the off-target single nicks are precisely repaired.³⁶ Immunotoxicity comprises immune reaction of the host against bacterial Cas9 protein, the delivery viral vector and the targeted cells.³⁷ To overcome the immune reaction against viral vectors new delivery methods have been developed such as microinjection, lipofection, and electroporation.³⁸

4. Conclusions Compared to the classical cancer treatment methods such as surgery, chemotherapy, radiotherapy, hormone treatment scientists are now oriented in genetic tools. According to the researches made in the last years we can conclude that CRISPR/Cas technology will be commonly used in the near future. It is worth mentioning that the studies in this area led to the CRISPR / Cas X discovery, which seems to be the future of genome editing techniques because it is less immunogenic compared to CRISPR/Cas9 and the protein can get inside the cell easier because it is smaller. The main problems of this mechanism that should be overcome in the future are immunotoxicity, off target effects and ethic discussions.

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**SÖZLÜ
BİLDİRİLER/
ORAL
PRESENTATION**

SÖZLÜ BİLDİRİ/ORAL PRESENTATION 1.

CASE REPORT/OLGU SUNUMU

Kliniğimizden Olgu Sunumu: Sezaryen Sonrası Cilt Altı Endometriozis Gelişmiş İki Olgunun Operasyonu

Case Report of our Clinic: Operation of Two Subcutaneous Endometriosis Experience After Caesarean Section

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ABSTRACT

When endometrial tissue (stroma or glands), is located out of uterus it is called endometriosis. Dysmenorrhea, dyspareunia, chronic pelvic pain are common symptoms of endometriosis¹. However, subcutaneous or Rectus muscle located endometriosis are able to present after caesarean section. Other extreme locations could be nasal mucosa or lungs. Aim of this presentation is endometriosis could be presented various complaints (nasal hemorrhage, hemoptysis) because of this variable locations. We reached our index cases when they came to our clinic with palpable subcutaneous mass. They were fertile young women and their complaints developed after having caesarean birth. Endometriosis could be presented in unusual ways. Increasing caesarean birth rates are effected this situation in bad ways, too. Endometriosis tissue is also invasive tissue so that it does not present in limited areas. We must care diagnosis and treatment of endometriosis.

Keywords: subcutaneous endometriosis, palpable mass, caesarean section

ÖZET

Endometrium dokusunun, uterus dışında görülmesine endometriozis adı verilir. Dismenore, kronik pelvik ağrı, disparanü şikayetleri ile prezente olması tipiktir¹. Ancak sezeryan sonrasında cilt altı ya da rektus yerleşimli endometriosis, nazal dokularda endometriosis, akciğerde endometriosis gibi farklı lokalizasyonlarda olabilmektedir. Bu vaka sunumunda amaç farklı yerleşim yerinde farklı şikayetlerle (burun kanaması, hemoptizi) prezente olabilen endometriosis dikkat çekmektir.

İndeks vakalarımıza cilt altında ele gelen kitle şikayeti ile kliniğimize başvurmaları sayesinde ulaşıldı. Her iki hastamızda fertilité çağında genç hastalardı. Sezaryenle doğum sonrasında şikayetlerinin geliştiğini belirttiler. Endometriosis alışılmadık bir şikayetle prezente olabilir. Artan sezeryan doğum oranlarının bu konuda göz ardı edilmez olumsuz katkısı mevcuttur. Endometriosis dokusu invaziv ilerler ve bulunduğu lokasyonda sınırlı kalmaz. Endometriosis tanısına ve tedavisine özen gösterilmelidir.

Anahtar Kelimeler: cilt altı endometriosis, ele gelen kitle, sezaryen

INTRODUCTION

It is named as endometriosis when endometrial tissue is located out of uterus. The primary symptom of endometriosis is pelvic pain, often associated with menstrual periods. Pain may increase over time². Because endometriosis is known as one of the chronic and inflammatory diseases. Its typical locations are well known.

Herein, we aim to report two atypically located subcutaneous endometriosis case which might be caused iatrogenic way. It is known that endometriosis may be presented after laparotomy, amniocentesis or caesarean section.

CASE REPORT

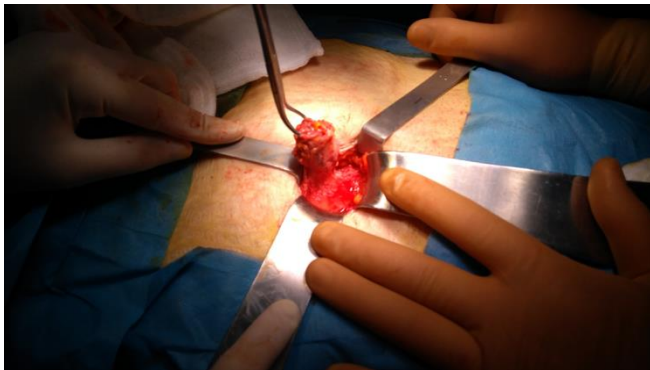
Case 1

Twenty eight year-old woman appealed to our clinic with pain and palpable mass above caeseraen section(C/S) scar. It was her second C/S operation, there is no significant history such as illness, medicine or cigarette, alcohol consumption. She had C/S operation 20 months ago and signified that her pain increased day by day. In physical examination it is found that 2 centimeter (cm) semi-mobile mass over 3 cm right corner of C/S scar. Ultrasonography(USG) defines there

is 3 cm mass under 2 cm of skin, may be agreeable endometrioma. Operation is elected by talking with patient. It is told that endometrioma/ endometriosis is repetitious.

Operation is started by using old C/S scar. We aimed to take off endometrioma (endometriosis cyst) under skin but when the mass was reached, it is understood that this is not a simple mass because it continued throug scarpa facia and rectus muscles. With patience, tissues were excised slowly and root of the mass totally excised from rectus muscles. After excision mass first scarpa facia was repaired then subcutaneous and the skin closed firmly. Operation was completed successfully and the pathology report was agreed on endometriosis.

Figure1. It is not an ordinary subcutaneous endometrioma, Scarpa invasion is seen here.

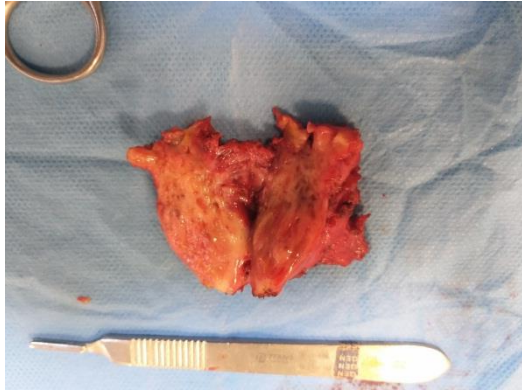


Case 2

Thirty three year-old woman, Gravida2, Livebirth2 she had her last C/S birth 5 years ago,she has no other spesific history appealed to our clinic painful and palpable mass close to C/S scar. She told ‘ I feel like having C/S birth every menstuel period for 5 years!’. Physical examination she had semimobile mass on the left corner of C/S scar. When USG is practised 43x40 milimeter (mm) mass is seen under 7 mm of the skin, agreeable to endometrioma. She was informed about operation and she decided operation.

Her operation was similar to Case 1, endometrioma tissue was invaded under scarpa fascia and same excision was practised. Abdominal layers were closed anatomically. Her pathology report was agreed with endometriosis, too. After operation healing period was completed, she reported that her painful periods ended.

Figure2. After excision of endometrioma, it is seen spotting bleeding focuses in the middle of the mass.



DISCUSSION

Endometriosis could be presented in unusual ways. Subcutaneous palpable mass is one of the way of unusual way. Scar endometriosis is a known entity and any patient presenting with swelling and cyclical pain in a caesarean scar area is pathognomonic of scar endometriosis³. Incidence of surgical scar endometriosis is 0.03–0.04%.⁴

Increasing cesarean birth rates might be a reason of subcutaneous endometriosis. We must care diagnosis and treatment of endometriosis. Endometriosis tissue is also invasive tissue so that it does not present in limited areas.

This case highlights the following: We should bear in mind endometriosis is one of the diseases which we may be face to face various clinical presentation. Increasing laparotomy or any other surgical interventions are one of the the reasons of increasing subcutaneous endometriosis.

Conflict of Interests: The authors declare no conflict of interests.

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SÖZLÜ BİLDİRİ/ORAL PRESENTATION 2

RESEARCH ARTICLE / ARAŞTIRMA MAKALESİ

Sebebi Bilinmeyen Nedenli Ateşli Enfeksiyöz ve Non-enfeksiyöz Hastalarda Komorbid Hastalıkların Karşılaştırılması

The Comparison of Comorbids in Infectious and Non-Infectious Patients with Fever of Unknown Origin

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Öz

Amaç: Herhangi bir nedenle yatan hastalarımızda enfeksiyon ya da enfeksiyon dışı ateşi olan hastalarda eşlik eden komorbidlerin dağılımını incelemeyi amaçladık.

Materyal ve Metod:

Çalışma Sakarya Üniversitesi Tıp Fakültesi Eğitim ve Araştırma Hastanesi (SÜEAH) iç hastalıkları kliniğine son 5 yıl içerisinde sebebi bilinmeyen ateş nedeniyle yatırılan hastalarda retrospektif olarak dosya taranarak klinik ve laboratuvar verileri kayıt altına alındı. Çalışmaya ateşi olup kan kültürü alınan hastalar alındı. Hastaların aldıkları antibiyoterapiler, komorbid hastalıkları retrospektif dosya verilerinden çıkarıldı. Kullandıkları ilaçlar kaydedildi. Çalışma verileri MS excel dosyasına alındıktan sonra SPSS 15 versiyon ile istatistik verileri hesaplandı. $p < 0.05$ altında olanlar anlamlı kabul edildi.

Çalışma, Sakarya Üniversitesi Tıp Fakültesi Etik Kurulu tarafından onaylandı (71522473/050.01.04/47) .

Bulgular: Çalışmaya 501 hasta alındı. 325 hasta non-enfeksiyöz (grup I) 176 hasta enfeksiyöz grupta (Grup II) idi. Grup I/Grup II karşılaştırıldığında 113/82 diyabetes mellitus, 79/39 hematoloji dışı malignite(HDM), 67/16 anemi, 61/44 kronik böbrek yetmezliği(KBY) , 52/38 hipertiroidi, 26/19 serebrovasküler hastalık(SVH), 22/4 gastrointestinal sistem kanaması,16/6 hematolojik malignite(HM), 12/2 pankreatit, 11/2 subklinikhipotiroidi, 10/2 ilaç intoksikasyonu, 5/2 romatoid artrit(RA), 3/4 diyabetik ketoasidoz(DKA), 3/0 myokard infarktüsü(MI), 3/0 sistemik lupus eritematosus(SLE), 2/0 gut, 2/0 vaskülit, 2/0 epilepsi, 2 pulmoner tromboemboli(PTE), 2 inflamatuvar barsak hastalığı(IBH), 1/0 erişkin still hastalığı(ESH), 1/0 ailesel akdeniz ateşi(FMF), 1/0 Behçet, 1/0 sarkoidoz, 1/0 dermatoyozit, 1/0 adrenal yetmezlik, 0/1 hemolitik üremik sendrom(HUS), 1/0 immün trombositopenik purpura(ITP) olarak bulundu.

Tartışma: En fazla non enfeksiyöz sebep Diyabetes Mellitus, Hematoloji dışı maligniteler(HDM) ve anemi idi. Enfeksiyöz hastalarda ise en fazla komorbidler diyabetes mellitus, KBY ve HDM idi. Diyabetes Mellituslu hastalarda ateş hem enfeksiyöz hem de non enfeksiyöz tablolarda sık görülen bir komorbiditedir. Diyabetes Mellitus ve KBY enfeksiyonun en sık görüldüğü komorbidlerdir. Bu hastaların aşılmasına önem verilmesi gerektiği düşünülmüştür.

Anahtar kelimeler: Nedeni bilinmeyen ateş, Komorbid hastalılar, Enfeksiyon

Abstract

Aim: We aimed to investigate the distribution of comorbidities in patients with infectious or non-infectious fever in our patients hospitalized with any reason.

Methods: The study was performed retrospectively and the clinical and laboratory data of the patients who were admitted to the internal medicine clinic of Sakarya University Training and Research Hospital (SUTRH) due to fever of unknown origin in the last 5 years were recorded. Patients who had fever and blood culture were included in the study. Antibiotherapies and comorbid diseases were taken from retrospective data. The drugs they used were recorded. After the data were transferred to MS excel file, statistical data were calculated with SPSS 15 version. P <0.05 was considered significant.

The study was approved by Sakarya University Faculty of Medicine Ethics Committee(71522473/050.01.04/47).

Results: The study included 501 patients. 325 patients were non-infectious (group I) and 176 were in the infectious group (Group II). When Grup I/Grup II compared, it was found that;113/82'ü diabetes mellitus, 79/39 non-haematological malignancies(NHM), 67/16 anemia, 61/44 cronic renal failure(CRF), 52/38 hyperthyroidism, 26/19 cerebrovasculer diseases(CVD), 22/4 gastrointestinal systems hemoragy,16/6 haematological malignancies (HM), 12/2 pancreatitis, 11/2 subclinical hypothyroidism, 10/2 drug intoxication, 5/2 rheumatoid arthritis(RA), 3/4 diabetic ketoacidosis(DKA), 3/0 myocard Infarctüs (MI), 3/0 systemic lupus erytematosus(SLE), 2/0 gout, 2/0 vasculitis, 2/0 epilepsy, 2 pulmonary thromboemboli(PTE), 2 inflammatory bowel disease (IBD), 1/0 adult onset still's diseases(AOSD), 1/0 familial mediterranean fever(FMF), 1/0 Behçet disease, 1/0 sarcoidosis, 1/0 dermatoyositis, 1/0 adrenal insufficiency, 0/1 hemolytic uremik syndrom(HUS), 1/0 immune thrombocytopenic purpura(ITP).

Discussion:

The most non-infectious causes were diabetes, non-hematological malignancies and anemia. In infectious patients, the most common comorbidities were diabetes mellitus, cronic renal failure(CRF) and non-hematologic malignancy(NHM). Fever in patients with diabetes mellitus is a frequent comorbidity in both infectious and non-infectious cases. Diabetes mellitus and CRF are comorbidities which the infections are seen most frequently. It is thought that the vaccination of these patients should be given importance.

Key words: Fever of Unknown origin, Comorbidity, Infection

Sebebi Bilinmeyen Nedenli Ateşli Enfeksiyöz ve Non-enfeksiyöz Hastalarda Komorbid Hastalıkların Karşılaştırılması

Giriş:

Nedeni bilinmeyen ateş (NBA) ilk kez Petersdorf ve Beeson tarafından 1961 yılında tanımlanmıştır. Klasik NBA, ateşin 38.3°C'nin üzerinde olması, sürenin üç haftadan uzun olması ve bir haftalık hastane araştırmasına rağmen nedenin belirlenememesi olarak tanımlanır. ^[1]. Daha

sonra Durack ve Street NBA'i ; Petersdorf ve Beeson tarafından orijinal olarak tanımlanan klasik FUO, nozokomiyal FUO, nötropenik FUO ve HIV ile ilişkili FUO olmak üzere dört sınıfa ayırmışlardır. Durack ve Street, bir vakayı FUO olarak sınıflandırılmadan önce, üç ayakta tedavi ziyareti veya üç günlük hastane içi soruşturmanın minimum tanısal değerlendirmesini önermiştir [2]. Mevcut literatür klasik FUO nedenlerinin dört ana etiyolojik kategoride sınıflandırılmasını önermektedir: enfeksiyonlar, neoplazmalar, enfeksiyöz olmayan enflamatuar hastalıklar(kollojen doku hastalıkları, vaskülitler v.b.) ve çeşitli durumlar.

NBA değerlendirilmesinde önemli olan iyi bir öykü almak ve hastayı tekrar değerlendirmektir. Daha çok, sık rastlanan hastalıkların atipik belirtilerle ortaya çıkmasına bağlıdır. Özellikle semptomların lokalizasyonu, süresi, eşlik eden durumlar, seyahat, hayvan teması, immünsüresyon durumu, ilaç ve intoksikasyon durumu, antibiyotikler sorgulanmalıdır. NBA tanısal yaklaşımda özellikle altta yatan hastalık tespit edilmelidir. Bunun için her ne kadar spesifik testler yapılması gerekse de tanıya ulaşmak için için oldukça fazla gereksiz testler yapılmaktadır. Mümkün olduğunca gereksiz testlerden kaçınılmalıdır.

Bizim bu çalışmadaki amacımız, herhangi bir nedenle iç hastalıkları kliniğimize yatan hastalarımızda enfeksiyon ya da non-enfeksiyöz ateşi olan hastalarda eşlik eden komorbidlerin dağılımını incelemeyi amaçladık.

Metod:

Çalışma Sakarya Üniversitesi Tıp Fakültesi Eğitim ve Araştırma Hastanesi (SÜEAH) iç hastalıkları kliniğine son 5 yıl içerisinde sebebi bilinmeyen ateş nedeniyle yatırılan hastalarda retrospektif olarak dosya taranarak klinik ve laboratuvar verileri kayıt altına alındı. Çalışmaya ateşi olup kan kültürü alınan hastalar alındı. Hastaların aldıkları antibiyoterapiler, komorbid hastalıkları retrospektif dosya verilerinden çıkarıldı. Kullandıkları ilaçlar kaydedildi. Çalışma verileri MS excel dosyasına alındıktan sonra SPSS 15 versiyon ile istatistik verileri hesaplandı. $p < 0.05$ altında olanlar anlamlı kabul edildi.

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hematoloji dışı malignite(HDM), 67/16 anemi, 61/44 kronik böbrek yetmezliği(KBY) , 52/38 hipertiroidi, 26/19 serebrovasküler hastalık(SVH), 22/4 gastrointestinal sistem kanaması,16/6 hematolojik malignite(HM), 12/2 pankreatit, 11/2 subklinihipotiroidi, 10/2 ilaç intoksikasyonu, 5/2 romatoid artrit(RA), 3/4 diyabetik ketoasidoz(DKA), 3/0 myokard infarktüsü(MI), 3/0 sistemik lupus eritematosus(SLE), 2/0 gut, 2/0 vaskülit, 2/0 epilepsi, 2 pulmoner tromboemboli(PTE), 2 inflamatuvar barsak hastalığı(IBH), 1/0 erişkin still hastalığı(ESH), 1/0 ailesel akdeniz ateşi(FMF), 1/0 Behçet, 1/0 sarkoidoz, 1/0 dermatoyozit, 1/0 adrenal yetmezlik, 0/1 hemolitik üremik sendrom(HUS), 1/0 immün trombositopenik purpura(ITP) olarak bulundu.

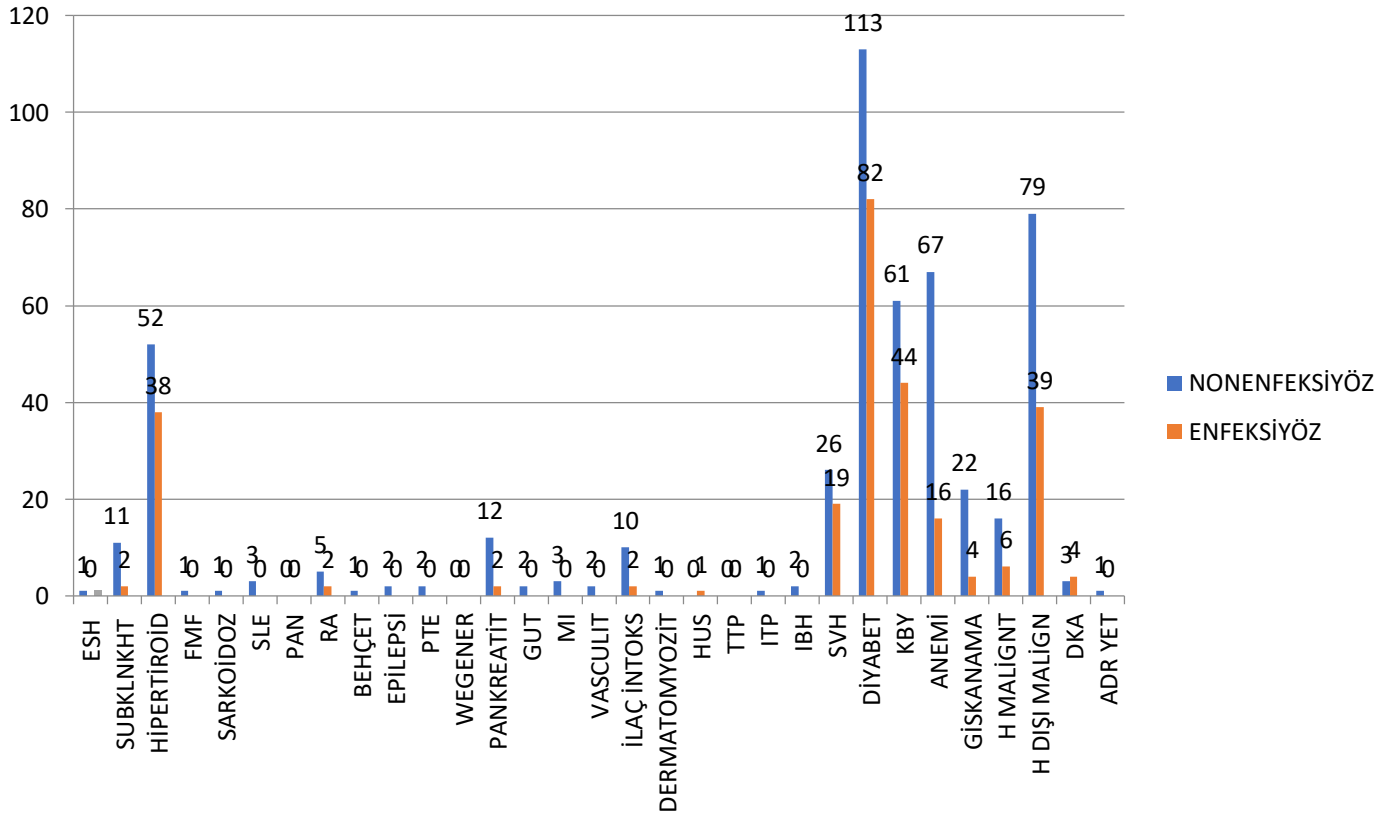
Tablo 1: Enfeksiyöz ya da non-enfeksiyöz ateşli hastalarda tanılar

	Grup 1	Grup 2	
TANILAR	(n=325)	(n=176)	p
Diabetes Mellitus	113	82	0,01
Kronik Böbrek Hastalığı	61	44	0,10
Hipertiroidi	52	38	0,14
Anemi	67	16	0,001
Hematoloji dışı malignite	79	39	0,65
Gis kanama	22	4	0,03
Serebro Vasküler Hastalık(SVH)	26	19	0,32
Hematolojik Malignite	16	6	0,50
Pankreatit	12	2	0,15
Sublinik Hipotiroidi	11	2	0,15
İlaç intoksikasyonu	10	2	0,23
Pulmoner Tromboemboli(PTE)	2	0	0,54
Wegener Granulomatozus	0	0	-

Gut	2	0	0,54
Myokard Enfarktüsü(MI)	3	0	0,55

Tablo 2: Enfeksiyöz ya da non-enfeksiyöz ateşli hastalarda tanılar

	Grup 1	Grup 2	p
TANILAR	(n=325)	(n=176)	
Vaskülit	2	0	0,54
Behçet Hastalığı	1	0	1
Dermatomyozit	1	0	1
Hemolitik Üremik Sendrom(HÜS)	0	1	0,35
Trombotik Trombositopenik Purpura(TTP)	0	0	-
İmmün Trombositopenik Purpura(ITP)	1	0	1
İnflamatuvar Barsak Hastalıkları(IBH)	2	0	0,54
Peri Arteritis Nodoza(PAN)	0	0	-
Erişkin Still Hastalığı(ESH)	1	0	1
Epilepsi	2	0	0,54
Familial Mediterranean Fever(FMF)	1	0	1
Sistemik Lupus Eritematozus(SLE)	3	0	0,55
Romatoid Artrit(RA)	5	2	1
Sarkoidoz	1	0	1
Diyabetik Ketoasidoz(DKA)	3	4	0,24
Adrenal yetmezlik	1	0	1

Grafik-1: Ateşi olan enfeksiyöz ve non-enfeksiyöz hastalarda genel veriler**Tartışma:**

NBA'ya neden olan hastalıklar coğrafi bölgeye, hastanın yaşına, sağlık hizmetlerine ulaşma kolaylığına, ülkenin sosyoekonomik durumuna göre değişmektedir[3]. NBA etiolojisinin bulunması hikaye, fizik muayene, laboratuvar ve radyolojik değerlendirmelerden elde edilen sonuçların değerlendirilmesini içerir. NBA'te altta yatan hastalığı teşhis edebilmek için basamak tanısal testler uygulanmalıdır[4]. İlk başlangıçta; Hemogram, periferik yayma, rutin biyokimyasal tetkikler, idrar analizi, kan kültürü, akciğer grafisi, idrar kültürü, abdominopelvik ultsanografi, bölgenin epidemiyolojik özelliklerine göre enfeksiyon serolojisi, birinci basamakta; ESH(Eritrosit sedimantasyon hızı), CRP(C-reaktif protein), RF(Romatoid faktör), ASO(anti-

streptolisin O), CMV(sitomegalovirüs) IgM, EBV(epstain bar virüs) IgM, HBsAg(hepatit B yüzey antijeni, CK(kreatin kinaz), ANA(antinükleer antikor), ds-DNA, TSH(tiroid stümulan hormon), PPD(purifiye protein derivesi), Brusella aglutinasyonu, Salmonela aglutinasyonu, gayta ve balgam kültürü, balgam ve gayta mikroskopisi, balgamda AARB(asit alkole dirençli basil), ikinci basamakta; Serum protein elektroforezi, ACE(angiotensin dönüştücü enzim), ANCA(anti nükleer sitoplazmik antikor), IgG, IgA, IgM, ENA(ekstrakte edilebilir nükleer antijen) paneli, C3, C4, kriyoglobulin , T3, T4, Mikoplazma-Toksoplazma- Treponoma-Yersinia hücre kültürleri, lenf nodu biyopsisi ve kültürü, karaciğer biyopsisi, kemik iliği biyopsisi, temporal arter biyopsisi, tiroid biyopsisi, 24 saatlik idrarda VMA(vanilmandelik asit, tiroglobulin , antimikrozomal antikor, PSA(prostat spesifik antijen), HIV(insan immünyetmezlik virüsü), HCV(hepatit C virüs), plazma kortizolü, ekokardiyografi, abdomino-pelvik BT(bilgisayarlı tomografi), toraks BT, rektosigmoidoskopi, baryum enema, sinus grafisi, diş muayenesi, fundus muayenesi, lökosit sintigrafisi, üçüncü basamakta; Tüm biyopsiler, laparoskopi, laparotomi, endoskopik inceleme gibi tüm invaziv işlemler uygulanabilmektedir [5], [6], [7]

Hayakawa ve arkadaşlarının, NBA ile ilgili 2000-2011 yılları arasında farklı ülkelerde yapılmış olgu serilerini kapsayan derlemesine göre 2628 NBA olgusunun etyolojik dağılımında, sıklık sırasıyla enfeksiyonlar, tanı konulamayanlar, enfeksiyon dışı inflamatuvar hastalıklar ve maligniteler olarak bulunmuştur. Gelişmekte olan ülkelerde enfeksiyöz nedenler (tüberküloz, tifoid ateş, malarya, anaerobik karaciğer apsisi gibi) yüksek oranda görülür [8], [9].

Birçok seride enfeksiyon hastalıkları %25- 65 oranıyla en sık karşılaşılan NBA nedeni olarak saptanmıştır [3]. Kollajen vasküler hastalıklar arasında erişkin Still hastalığı en sık NBA nedeni olan hastalık olarak bildirilmektedir[10]. SLE, nadir görülen NBA nedenleri arasındadır. Farklı çalışmalarda SLE'nin NBA hastaları arasındaki oranı %1-2 olarak bildirilir [4]. NBA hastalarında tüm çabalara rağmen bir grup hastada ateş nedeni ortaya konulamamaktadır. Yaşlılarda NBA etyolojisinde gençlerden farklı olarak enfeksiyon ve malignite sıklığının arttığı bilinmektedir. Malignite kaynaklı NBA'lar içerisinde hem Hodgkin hem de non-Hodgkin lenfomalar en sık nedenlerden biri olarak bildirilmiştir [11]. Solid tümörlerde de ateş görülebilmekle birlikte NBA etyolojisinde sık bildirilmemektedir[4].Çalışmamızda en fazla non enfeksiyöz sebep diyabetes mellitus, hematoloji dışı maligniteler(HDM) ve anemi idi.

Enfeksiyöz hastalarda ise en fazla komorbidler diyabetes mellitus, KBH(Kronik Böbrek Hastalıkları) ve HDM idi. Diyabetes mellituslu hastalarda ateş hem enfeksiyöz hem de non enfeksiyöz tablolarda sık görülen bir komorbiditedir. Diyabetes mellitus ve KBY enfeksiyonun en sık görüldüğü komorbidlerdir. Bu hastaların aşılmasına önem verilmesi gerektiği düşünülmüştür.

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SÖZLÜ BİLDİRİ/ORAL PRESENTATION 3.

ERİŞKİNLERİN AŞI REDDİNE İLİŞKİN GÖRÜŞLERİNİN ARAŞTIRILMASI

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Sakarya Üniversitesi Tıp Fakültesi Dönem 5¹

Sakarya Üniversite Tıp Fakültesi Enfeksiyon Anabilim Dalı²

Sakarya Üniversite Tıp Fakültesi Halk Sağlığı Anabilim Dalı³

Sakarya Üniversitesi Tıp Fakültesi Sağlık Bilimleri Fakültesi Hemşirelik Bölümü⁴

Giriş

Aşılar enfeksiyon hastalıkları için en etkili korunma araçlarından biridir. Bir aşılama programının başarısı, toplum tarafından kabul görmesi ve uygulanabiliyor olmasına bağlıdır. Dünyada ve ülkemizde aşı karışıklığı artan bir trend halindedir. Çocuklardaki aşı reddine ilişkin yeterli veri olmasına rağmen erişkinlerdeki aşı reddinin sebeplerini irdeleyen araştırmalar sınırlıdır. Bu nedenle bu araştırmada 18-80 yaş aralığındaki gönüllülerin aşı reddine ilişkin görüşlerinin incelenmesi amaçlanmıştır.

Materyal ve Method

Tanımlayıcı olarak gerçekleştirilen bu araştırmanın örnekleme 24 Ocak 2019 – 22 Şubat 2019 tarihleri arasında Sakarya Üniversitesi Eğitim Araştırma Hastanesi polikliniklerine ayaktan başvuran 18-80 yaş aralığındaki, araştırmaya katılmayı kabul eden 500 hasta ve hasta yakını dahil edildi. Veriler kurum izni ve etik kurul onayı, gönüllü onamı alındıktan sonra, araştırmacılar tarafından literatür taranarak oluşturulan sosyodemografik özellikler ve aşı reddine ilişkin soruları içeren veri toplama formu ile toplandı. Verilerin değerlendirilmesi bilgisayar ortamında, yüzdeler, ortalama, standart sapma, normal dağılım verilerde parametrik testler; normal dağılmayanlarda ise non-parametrik testler kullanılarak yapıldı.

Bulgular

Toplam 500 katılımcının yaş ortalamaları $37,76 \pm 13,42$ olup 290'ı kadın, 210'u erkekti. Katılımcıların eğitim durumları incelendiğinde en fazla üniversite mezunu (%34) olduğu görüldü. Katılımcıların %67,6'sı evli, %32,4'ü bekar. Çalışmamızda aşılama ile ilişkin bilgileri nereden edindiği sorgulandığında cevapların; sağlık çalışanları %69,2, televizyon %51,8, internet

%41,8, aile ve yakın çevre %41, sosyal medya %29, aşı kampanyaları %25,6, gazete %13,6, ve diğer (%4) şeklinde sıralandığı belirlendi. Aşı ile ilgili karar verirken hangisi sizin için belirleyici olur sorusuna neredeyse tamamına yakını (%93,8) sağlık çalışanları şeklinde cevapladı. Hangisi sizi aşılansından alıkoyar sorusuna en fazla verilen cevap aşıda cıva olma olasılığıydı(%23,4).

Sonuçlar

1. En fazla bilinen aşı tetanoz iken en az bilinen aşı meningokok aşısıydı.
2. En fazla yaptırılan aşı tetanoz iken en az yaptırılan aşı Zona ve HPV idi.
3. Aşı ile önlenemeyen hastalıklardan en az duyulanı karaciğer kanseri idi.
4. Grip aşısı uygulanmasına en karşı olunan aşıydı.
5. Aşıda cıva olma olasılığı aşı reddinde önemli bir etmendi.

Introduction

Vaccines are one of the most influential defensive tools for preventing the infectious diseases. Vaccinating programs success is depend on acceptance of society and feasibility. Although there are various of data about vaccines refusal on children, there are limited studies analyzing the vaccine refusal on adults. For this reasons, we aim to analyze the behaviour and opinion of 18-80 year-old volunteers.

Materials and Methods

The sample of this research conducted as descriptive included 500 patients and patients relatives who accepted to participate in this study between the dates of January 24 and February 22, 2019, between the ages of 18-80 the patients who accepted to participate in the study were included in the study. The data were collected through a data collection form which included questions about socio-demographic characteristics and vaccination rejection, which were formed by the researchers by literature review, after the consent of the institution and the consent of the ethics committee were obtained. Data were evaluated by computer, percentage, mean, standard deviation, parametric tests in normal distributed data; non-parametric tests were used for non-normal distribution.

Findings

When the educational status of the participants were examined, it was seen that the most of the participants were university graduates (34%). 67.6% of the participants were married and 32.4% were single. When questioning where the information about vaccination is obtained; television

51.8%, newspapers 13.6%, internet 41.8%, social media 29%, family and significant others 41%, health care workers 69.2%, vaccine campaigns 25.6% and other (4%) sorted. In the decision on vaccination, whichever is the decisive question for you, almost all (93.8%) answered the question as health professionals. The most common answer to the question, which prevents you from being vaccinated, was the possibility of mercury in the vaccine. (23.4%)

Results

- 1- The most known vaccine was tetanus, the least known vaccine was meningococcal vaccine.
- 2- The most common vaccine was tetanus, the least immunized vaccine was shingles and HPV.
- 3- Liver cancer was the least heard of vaccine-preventable diseases.
- 4- Influenza vaccine was the most opposed vaccination.
- 5- The possibility of mercury in the vaccine is an important factor in rejecting the vaccine.

SÖZLÜ BİLDİRİ/ORAL PRESENTATION 4.

**VİTAMİN D EKSİKLİKLERİNDE VİTAMİN D METABOLİZMASI İLE İLİŞKİLİ
CYP24A1 GEN POLİMORFİZMİNİN DEĞERLENDİRİLMESİ
EVALUATION OF CYP24A1 GENE POLYMORPHISM ASSOCIATED WITH VITAMİN
D METABOLISM IN VITAMİN D DEFICIENCIES**

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Özet

Amaç: Kalsiyum metabolizması üzerinde etkisi bilinen D vitaminin son zamanlarda otoimmün hastalıklar, kanserler gibi pek çok hastalık durumuyla ilişkisi gösterilmiştir. Vitamin D metabolizmasıyla ilişkili bazı genler, dolaşımdaki vitamin D durumuyla ilişkilidir. Yapmış olduğumuz bu çalışmada, vitamin D yetmezlik/eksikliklerinde, D vitamini metabolizmasıyla ilişkili proteinin gen polimorfizminin (CYP24A1) değerlendirilmesi amaçlanmıştır.

Yöntemler: D vitamini yetersizliği (80), eksikliği (81) tanısı konmuş 161 hasta ve D vitamini normal (84) sağlıklı kişi kontrol olarak çalışmaya alınmıştır. EDTA'lı ve jelli düz tüpe alınmış kan örneklerin serumları ayrıldıktan sonra -80 °C'de analize kadar saklandı. Serumlarda vitamin D düzeyleri yüksek performanslı likit kromatografisi (HPLC) ile ölçüldü. EDTA'lı tüpteki kan örneklerinden ticari kitler kullanılarak DNA izolasyonları yapıldı ve Real-time PCR tekniği ile CYP24A1 geninin rs2209314 allellinde, tek nükleotit polimorfizmi (SNP) çalışıldı.

Bulgular: Katılan bireyler, I. grup: D vitamin düzeyleri normal (30-110 ng/mL) olan herhangi bir hastalığı olmayan sağlıklı 84 birey (kontrol); II. grup D vitamini (<20 ng/ml) eksikliği olan 81 hasta; III. grup D vitamini yetersizliği (20-30 ng/ml) olan 80 hasta olmak üzere gruplandı. Çalışılan enzimin (24-Hidroksilaz) SNP genotip frekans dağılımları gruplar arasında

istatistiksel anlamlı fark göstermedi. Ancak CYP24A1-rs2209314'e ait allel frekans dağılımları grup III ile grup I (kontrol) karşılaştırıldığında T allelinin grup III'te anlamlı yüksek olduğu (P=0.030) bulundu.

Sonuç: Bu çalışma sonucunda, CYP24A1 (24- α Hidroksilaz) enziminin rs2209314 varyantında T allelinin D vitamini eksikliği ile bir ilişki gösterebileceği saptandı.

Anahtar Kelimeler: CYP24A1, Gen Polimorfizm, Vitamin D, Vitamin D eksikliği/yetmezliği

Abstract

Aim: Vitamin D, which has an effect on calcium metabolism, has recently been shown to be associated with many diseases such as autoimmune diseases and cancers. Some genes involved in vitamin D metabolism are associated with circulating vitamin D status. In this study, we aimed to evaluate gene polymorphism of proteins associated with vitamin D metabolism in patients with vitamin D deficiency/insufficiency.

Methods: 161 patients with vitamin D deficiency (80), deficiency (81), vitamin D normal/healthy (84) subjects were included in the study. Vitamin D levels were measured by high performance liquid chromatography(HPLC) in serum. DNA isolations were made by using commercial kits from the blood samples in EDTA tube. Real-time PCR technique was used to investigate the single nucleotide polymorphism (SNPs) of the CYP24A1-rs2209314 genes.

Results: Participants were grouped as group I:84 subjects with normal vitamin D levels(30-110 ng/ml); II. 81 patients with vitamin D deficiency (<20 ng / ml); III. 80 patients with vitamin D insufficiency (20-30 ng/ml). Genotype frequency distributions of the studied enzyme (24-hydroxylase) SNPs showed no statistically significant difference between the groups. However, when allele frequency distributions of CYP24A1-rs2209314 were compared with group III and group I(control), It was found that T allele was significantly higher in group III (P<0.030).

Conclusion: According to the our results, we have found that the T-allele in the rs2209314 variant of the CYP24A1 may be associated with vitamin D insufficiency.

Keywords: CYP24A1, Gene Polymorphism, Vitamin D deficiency/insufficiency

SÖZLÜ BİLDİRİ/ORAL PRESENTATION 5.

REVIEW ARTICLE

How can the use of CRISPR/Cas9 method revolutionize cancer treatment?

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44

991

169

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Abstract

Cancer is the second most common disease in humans with a rising incidence; therefore innovative technologies that have been developed in recent years besides classical treatment methods are also important for us. Genotyping tumor changes will be adaptable in treating different types of cancer in the future. These innovative technologies are made possible by the elucidation of tumor biology. Among these technologies CRIPR/Cas9 (clustered regularly interspaced short palindromic repeats/ CRISPR associated protein 9) has an important place in genetic researches in the recent years. In this review I will briefly explain the mechanisms behind CRISPR/Cas9 technology and focus in the most recent usage of CRISPR/Cas9 in the treatment of different types of cancer. For this review I choose to investigate CRISPR/Cas9 in different types of cancer such as Bladder carcinoma, Breast Cancer, Cervical Cancer, Hepatocellular Carcinoma, and Osteosarcoma. This review includes information about CRISPR/Cas9 mechanism and it's relation with each of the cancers mentioned before, the off target effects, immune reactions and the solutions to them are included.

Key words: Oncology, CRISPR/Cas9, bladder cancer, breast cancer, cervical cancer, hepatocellular carcinoma, osteosarcoma

Contents

1. Basic principles of CRISPR/Cas9 technology
2. The uses of CRISPR/Cas9 technology against cancer
3. Off target effects, immune reactions of CRISPR/Cas9 and solutions
4. Conclusions

1. Basic principles of CRISPR/Cas9 technology

CRISPR/Cas9 is an immune mechanism used among bacteria and archaea against plasmid transfer and phage infection, as part of the adaptive immunity; it was first discovered in *E. coli* and was named after the repeat sequences that were interrupted by spacer sequences.^{1, 2} Repeats are regularly arranged and between each pair of repeats uniform sequences with constant sizes called spacers are located.² This technology is mainly used in understanding genetic background of diseases, elimination of gene mutations that can cause diseases, activation of tumor suppressor genes, inactivation of oncogenes.¹ The main difference between CRISPR/Cas9 and other DNA editing techniques such as ZNF (Zinc Finger Nucleases) and TALENs (Transcription Activator Like Effector Nucleases) is that CRISPR/Cas9 recognizes DNA not by proteins but by a short recognition sequence made up of 20 nucleotides.^{1, 2} Cas9 protein forms a complex with a single strand guide RNA. A short genomic sequence made up of 2 to 5 base pairs called PAM (Protospacer Adjacent Motif) is recognized by Cas9 protein and guide RNA complex. This complex attaches to the genomic DNA sequence close to PAM.³ After binding to the DNA CRISPR technology is capable of creating double strand breaks. According to the cell cycle phase these breaks can be repaired by nonhomologous end joining (NHEJ) or homology directed repair (HDR). Compared to classical methods CRISPR/Cas9 is very useful in genome engineering because it is simple, precise and highly efficient.⁴

2. The uses of CRISPR/Cas9 technology against cancer

According to the global health statistics cancer is the second most common disease in humans and its incidence is rising.^{5, 6} There are several methods that are used in cancer treatment such as surgical treatments, radiotherapy, chemotherapeutic drugs, hormonotherapeutic drugs, monoclonal antibodies.⁷ A very exciting progress has been reached in understanding and treating cancer by the study of genes, their activity and genetic abnormalities. Genotyping tumor changes will be adaptable in treating different types of cancer in the future. These innovative technologies are made possible by the elucidation of tumor biology.^{8, 6} One of the most exciting genome editing methods is CRISPR/Cas9 technology, which is used to activate or repress the expression of a variety of genes in many organisms.^{1, 6}

Bladder Cancer is the third most common cancer in men and seventeenth in women.^{9,10} Risk factors include use of tobacco¹¹, family history of bladder cancer¹², genetic mutations in genes such as TP53, RB1, FGFR, PIK3CA, HRAS, KRAS, and TSC1¹³. Yunchen Liu et al. constructed AND gate circuit (digital logic gate with two or more inputs and one output that performs logical conjunction) based on CRISPR/Cas9 system for targeting human bladder cancer cells and used the hTERT and hUP II promoters as the two input devices. The circuits effectively inhibited bladder cancer cell growth, induced apoptosis and decreased cell motility by regulating the corresponding gene in vitro.^{14,15} Another research made by Shuai Zhen et al. showed that lncRNA Urothelial Carcinoma Associated-1 helps the progression of bladder cancer. Therefore they designed gRNAs specific to UCA1 and constructed CRISPR/Cas9 systems targeting UCA1. With the use of this mechanism the cell cycle was arrested at G1 phase, there was an increase in apoptosis and an increase in MMP (matrix metalloproteinase) responsible for extracellular matrix degradation.¹⁶

Breast Cancer is the most common cancer in women globally; based on histopathological and molecular features its metastatic forms have worse prognosis.¹⁷ Breast cancers that are positive for ER or HER2 receptors are treated with endocrine treatment, which lowers the level of hormones that are released because of the signals received from the receptors or directly inhibits the receptors. In some cases drug resistance can occur because of mutations such as D538G Mutation in Estrogen Receptor.^{18, 19} In treating breast cancer CRISPR/Cas9 can be used to create a dominant negative mutation targeting the HER2 or ER, thereof inhibiting proliferation of breast cancer cells. In treating drug resistance in breast cancer sgRNA will guide the Cas9 enzyme to the mutated exon of ER or HER2 and the mutation will be repaired by Cas9. Another application of CRISPR/Cas9 in breast cancer treatment is by blocking cellular events of cancer cells. Just like any other cell, cancer cells depend in many cellular events such as transcription, splicing, translation, protein folding/degradation, and cell proliferation.²⁰

According to the WHO statistics cervical cancer makes up to 6, 6% of all cancer in females. It is the fourth most frequent cancer in women.²¹

More than 90% of invasive cervical cancers are caused by high risk human papilloma virus (HR-HPV) such as types 16 and 18. In regulating viral replication and viral cell cycle an early region of HPV genome (E) plays an important role, on the other hand a late region codes two open reading frames called L1 and L2 forms the viral capsid. In carcinogenesis viral DNA plays a crucial role because it becomes part of the host's genome and viral oncogenes that are continuously expressed inactivate tumor suppressor genes such as p53, RB. This process can cause genomic instability and

accumulation of somatic mutations that lead to cancer. According to Zhen, S., et al. the application of CRISPR/Cas9 demonstrated reduced cancerous growth in vivo.^{22,23} The main target of CRISPR/Cas9 is the promoter and open reading frame of E6 and E7 transcripts, it reduces E6 and E7 mRNA level and increases p53 level also induces apoptosis.²⁴ Also CRISPR/Cas9 transfected cancer cells demonstrated reduced growth in vivo because this mechanism has the ability to arrest cell cycle and lead to cancer cell death.²⁵

Hepatocellular Carcinoma is the primary malignancy of the liver and it is related to chronic infection with hepatitis B.²⁶ Song et al. used CRISPR/Cas9 system to eliminate HbsAg in hepatocellular carcinoma cell lines, they came to the conclusion that in contrast to HbsAg overexpression, HbsAg knockout inhibited proliferation and growth rate of hepatocellular carcinoma. HbsAg knockout is reached by disruption of open reading frame preS1/preS2/S, and according to the results the production of HbsAg was suppressed. The suppression was higher when sgRNA targeted the preS1 and preS2 regions.²⁷

The most common malignant tumor of bones is osteosarcoma.²⁸ In 30% of cases even aggressive chemotherapy doesn't prevent progression and metastasis. Yunfei Liao et al. applied CRISPR/Cas9 technology in osteosarcoma cell lines and targeted PD-L1 gene that codes PD-L1 protein at the DNA level. The role of PD-L1 is to prevent the damage that immune system may cause to nonharmful cells, but some cancer cells express PD-L1 which sends inhibitory signals to the immune system and prevents it from attacking these cancerous cell lines. Yunfei Liao et al. in their in vitro experiments created a 3D cell culture, and observed the growth and tumorigenicity of osteosarcoma cell lines such as KHOS and MNNG/HOS formed by PD-L1 CRISPR/Cas9 modification compared to controls. They came to the conclusion that PD-L1 CRISPR/Cas9 suppressed sphere formation both in KHOS PD-L1 CRISPR/Cas9 and MNNG/HOS PD-L1 CRISPR/Cas9 cells in three-dimensional culture.²⁹

3. Off target effect, immunotoxicity of CRISPR/Cas9 and solutions Technologies such as TALENS, Zinc finger nucleases, CRISPR/Cas9 that use engineered nucleases create double strand breaks in target DNA, which is then repaired by one of two pathways: NHEJ (non homologous end joining) or HDR (homology directed repair).³⁰ Sometimes these complexes bind to DNA outside of the target sequence, and cause genetic mutations such as point mutations,³¹ deletions, insertions,³² inversions,³³ and translocations³⁴ caused by double strand breaks out of target sequence. Fortunately off target effects can be overcome; Xiao et al designed a tool called CasOT that could find potential off target effect sites.³⁵ Also the use of a mutant form of Cas9 in pairs called Cas9 nickase can make this tool target specific, because nickases generate paired breaks in each DNA strand and the off-target single nicks are precisely repaired.³⁶ Immunotoxicity comprises immune reaction of the host against bacterial Cas9 protein, the delivery viral vector and the targeted cells.³⁷ To overcome the

immune reaction against viral vectors new delivery methods have been developed such as microinjection, lipofection, and electroporation.³⁸

4. Conclusions

Compared to the classical cancer treatment methods such as surgery, chemotherapy, radiotherapy, hormone treatment scientists are now oriented in genetic tools. According to the researches made in the last years we can conclude that CRISPR/Cas technology will be commonly used in the near future. It is worth mentioning that the studies in this area led to the CRISPR / Cas X discovery, which seems to be the future of genome editing techniques because it is less immunogenic compared to CRISPR/Cas9 and the protein can get inside the cell easier because it is smaller. The main problems of this mechanism that should be overcome in the future are immunotoxicity, off target effects and ethic discussions.

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SÖZLÜ BİLDİRİ/ORAL PRESENTATION 6.

Elektromanyetik alanlara maruziyet özellikleri ile sağlık sorunları arasındaki ilişki

The relationship between the characteristics of electromagnetic fields exposure and health problems

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Özet

Amaç: Günlük hayatımızda GSM sistemleri, radarlar, mikrodalga fırınlar, radyo, TV, radyolar gibi kullandığımız teknolojik sistemler elektromanyetik radyasyonun kaynağıdır. Kullanımlarının yaygın olmasıyla, insanlar daha fazla elektromanyetik alana (EMA) maruz kalmaktadırlar. EMA maruz kalma süresi ve EMF kaynağının mesafesi EMA'nın insan sağlığı üzerindeki etkileri için önemli faktörlerdir. Bu çalışmada amacımız elektromanyetik alanlara maruz kalmanın sağlık üzerindeki etkilerini, EMA'ların özellikleri, elektronik sistemlere maruz kalma süresi ve ilgili sağlık problemleri parametreleri içeren anketler kullanarak değerlendirmektir.

Yöntemler: Çalışmaya 552 Meslek Yüksekokulu Sağlık Hizmetleri öğrencisi dahil edildi. EMF maruziyetinin özellikleri ve ilgili sağlık problemleri hakkında anket uygulandı.

Bulgular: Öğrencilerimizin %32.4'ü erkek, %65.8'i kadın, ortalama yaşı 21(18-41) idi. Yüksek gerilim hatlarına maruz kalma ile uyku bozuklukları, baş ağrısı sıklığı ve diğer sağlık sorunları arasında ilişkiler vardı. Ayrıca, alışveriş merkezinde harcanan zaman ile göz rahatsızlığı ve işitme kaybı arasında ilişki olduğu saptandı. Elektrik ve elektronik sistemlere maruz kalma ile baş ağrısı sıklığı, konsantrasyon bozukluğu, yorgunluk, kas ağrısı arasında ilişki vardı. Mikrodalga fırın kullanımı ile

uyku bozukluğu, yorgunluk, kas ağrısı, tat alma duyusu kaybı, baş dönmesi, cilt rahatsızlığı arasında ilişki vardı. Göz rahatsızlığı ile kas-iskelet sistemi rahatsızlığı arasında ilişki olduğu tespit edildi.

Sonuç: Bu çalışmada hem EMA'lara maruz kalma yoğunluğunun hem de sağlık meslek yüksekokulu öğrencilerinde bazı sağlık problemleriyle ilişkisini değerlendirdik. Elde ettiğimiz sonuçlara göre, günlük hayatımızda kullanılan teknolojik sistemler nedeniyle elektromanyetik radyasyona maruz kalma önemli ölçüde artmıştır. Sebep-sonuç ilişkisi henüz tam olarak kurulmasına rağmen, elektromanyetik radyasyona maruz kalma bazı sağlık sorunları ilişkilendirilebilir. Tüm bu verilerin daha detaylı ölçeklendirilmiş anket çalışmaları ile daha geniş popülasyonlarda çalışılması gerekir.

Teşekkür (varsa): Araştırmamıza katılan 2016-2017 Eğitim Yılı İstanbul Gelişim Üniversitesi Sağlık Hizmetleri Meslek Yüksekokulu Öğrencilerine teşekkür ederiz. Çalışma, İstanbul Gelişim Üniversitesi Etik Kurulu tarafından onaylandı (77366270-199-E.4821) ve Helsinki Bildirgesi'ne uygun olarak yürütüldü.

Anahtar kelimeler: Elektromanyetik alan, üniversite öğrencileri, sağlık sorunları

Abstract

Aim: Technological systems we use in our daily life such as GSM systems, radars, microwave ovens, radio, TV, radios, generate electromagnetic radiation. As their use becomes widespread, people are beginning to be exposed to more electromagnetic fields (EMFs). The EMF exposure duration and the distance of the EMF source are important factors for EMF's effects on human health. In this survey study, our aim is to evaluate the effects of exposure to electromagnetic fields on health by using questionnaires which include parameters such as characteristics of EMFs, time of exposure to electronic systems and related health problems.

Methods: 552 vocational school students of health services are included in this study. The questionnaire about characteristics of EMF exposure and related health problems were applied.

Results: 32.4% of our students were male, 65.8% were female and their median age was 21(18-41). There were relations between exposure to high voltage lines and sleep disorders, headache frequency and other health problems. Also, we found that there were relations between the time spent in the shopping center and eye discomfort and loss of hearing loss. Additionally, there were relations between exposure to electrical and electronic systems, headache frequency, concentration disorder, fatigue, muscle pain. There were relations between the use of microwave oven and sleep

disorder, fatigue, muscle pain, loss of taste sensation, dizziness, skin discomfort. We observed relations between eye discomfort and musculoskeletal system discomfort.

Conclusion: In this study we evaluated that both intensity of exposure to EMF and its relation with some health problems in vocational school students of health services. According to our results exposure to electromagnetic radiation due to technological systems used in our daily life has increased considerably. Although the its cause-result relationship is not yet fully established, exposure to electromagnetic radiation might be associated with certain disorders. All these data need to be studied in wider populations with more detailed scaled survey studies.

Acknowledgements (if any): We would like to thank the 2016-2017 Education Year İstanbul Gelişim University Vocational School Students of Health Services who participated in our survey. The protocol was approved by the Ethics Committee of İstanbul Gelişim University and was conducted in accordance with the Declaration of Helsinki (77366270-199-E.4821).

Key words: Electromagnetic field, university students, health problems

**POSTER
BİLDİRİ/
POSTER
PRESENTATION**

POSTER BİLDİRİ/POSTER PRESENTATION 1.

AKRİLAMİDİN NÖROTOKSİK ETKİLERİ

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ÖZET

Amaç: Akrilamid, şekerden ve aminoasitlerden oluşan kimyasal bir maddedir. Aminoasit içeriği ağırlıklı olarak Asparajin'den oluşur. Akrilamidin oluşumunda şeker ve aminoasit arasındaki tepkimeye "Maillard Reaksiyonu" denir. Maillard Reaksiyonu, non-enzimatik bir reaksiyondur. Reaksiyon sonucunda ürünün spesifik tadı ve kokusu yanında toksik ve mutajen maddeler gibi kanserojen faktörler açığa çıkar. Glukoz ve Asparajinin Maillard Reaksiyonu sonucunda akrilamid oluşur. Bu akrilamid nörotoksik bir maddedir. Literatürler ışığında akrilamid nörotoksik etkilerini araştırmayı amaçladık.

Gereç ve yöntem: Farklı literatürlerden elde edilen bilgilerden oluşmuş bir derleme yazıdır.

Bulgular ve sonuç: Akrilamid tüm vücuda, neredeyse tüm organlara dağılır ve metabolize edilir. Metabolize edilmesi sonucu ana yıkım ürünü Glycidamide'dir. Hayvanlar üzerinde yapılan deneyler akrilamidin, her yaşta birey için tehlike oluşturabilecek potansiyele sahip, kanserojen bir madde olduğunu göstermiştir. Yiyeceklerin stoklandığı ve üretildiği yerlerdeki sıcaklık seviyeleri, Akrilamid oluşumu açısından büyük önem taşır. Glycidamide'in ratlarda meme bezi, testisler ve tiroid bezinde bulunması farelerde akciğer, over, cilt ve midede kanser oluşumunu tetiklediği gösterilmiştir. Çalışmalarda akrilamid'in sinirsel iletimi bozduğu gösterilmiştir. Bununla birlikte, Akrilamid'in presinaptik nörotransmitter salınımını, membrandan geri alımını ve veziküller depolanmayı, bu süreçle ilişkin proteinlerin üzerindeki N-ethylmaleimide (NEM)-sensitif faktör, dopamin membran taşıyıcı proteini ve veziküller monoamin taşıyıcıları gibi sistin kalıntılarıyla birleşerek bozduğunu göstermiştir. Bu veriler, sistin addüksiyonunun Akrilamid nörotoksitesinde merkezi bir rol oynadığını göstermiştir. Akrilamid'in katalitik triadlardaki tiolat alıcılarıyla reaksiyona girerek redoks nöromodülatörlerinin proteinler üzerindeki inaktivasyon etkisini taklit ettiğini göstermektedir. NO'nun Akrilamid üzerine inhibisyon etkisi vardır. Bu yüzden, Akrilamid'in indüklediği sinaptik toksisite, ileri sürülen NO bağımlı mekanizmaya göre, sinir uçlarına spesifite göstermez.

Anahtar Kelimeler: Akrilamid, nörotoksik etki, kanser

NEUROTOXIC EFFECTS OF ACRYLAMID

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ABSTRACT

Aim: Acrylamide is a chemical substance consisting of sugar and amino acids. The amino acid content consists mainly of Asparagine. The reaction between sugar and amino acid in the formation of acrylamide is called "Maillard Reaction". The Maillard Reaction is a non-enzymatic reaction. As a result of the reaction, besides the specific taste and smell of the product, carcinogenic factors such as toxic and mutagenic substances are released. As a result of Maillard Reaction of glucose and asparagine, acrylamide is formed. This acrylamide is a neurotoxic substance. In the light of literature, we aimed to investigate the neurotoxic effects of acrylamide.

Materials and methods: The study is a review research formed from data obtained from different literature.

Findings and conclusions: Acrylamide is dispersed throughout the body, almost all organs and metabolized. The main degradation product is glycidamide as a result of its metabolism. Animal experiments have shown that acrylamide is a carcinogenic substance that has the potential to be dangerous for individuals of all ages. Temperature levels in the places where food is stocked and produced are of great importance for the formation of acrylamide. The presence of glycidamide in mammary glands, testes and thyroid glands in rats has been shown to trigger cancer formation in lung, ovary, skin and stomach. Studies have shown that acrylamide disrupts neural transmission. However, it has been shown that acrylamide disrupts presynaptic neurotransmitter release, membrane retrieval and vesicular storage by combining cystine residues such as N-ethylmaleimide (NEM) proteinsensitive factor, dopamine membrane transporter protein and vesicular monoamine carriers on proteins associated with this process. These data indicate that cystine adduction plays a central role in acrylamide neurotoxicity. It shows that acrylamide reacts with thiolate receptors in catalytic triads to mimic the inactivation effect of redox neuromodulators on proteins. NO has an inhibition effect on acrylamide. Therefore, acrylamide-induced synaptic toxicity does not show



specificity to nerve endings compared to the claimed NO-dependent mechanism.

Keywords: Acrylamide, neurotoxic effect, cancer

POSTER BİLDİRİ/POSTER PRESENTATION 2.

SARKOİSDOSIS AND MYELODISPLASTIC SENDROM TOGETHERNESS

A CASE PRESENTATION

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INTROCUCTION: Sarcoidosis is a systemic granulomatous disease that mostly affects lungs and lymphatic system but also can catch organs and all other tissues. Myelodysplastic sendroms "MDS" are: cytopenia which can be watched at peripheral blood, characterized with morphological and functional abnormalities at hematopoietic cells, high risk to develop acute leukemia, clonal hematological malignities of bone marrow. Our purpose is present a case that includes both diseases.

CASE: 31 years old male patient which has an on-going pain at his heel for 7-8 days while he gets examined at hematology branch to research leucopenia etiology: He consulted to hospital with symptoms of pain and swelling at the knee, elbow and digits; at the rheumatological questioning fever, asthenia, weight loss, sweating at night, dryness of the mouth and stomach ache detected. Also anemia and leukopenia, vascular lesions below the knee and not being able to see far were existing problems. When the patient has seen by hematology' s diagnosis was myelodysplastic sendrom after bone marrow aspiraton and biopsy samples were taken. Because of pathological lymph nodes mediastinal excisional lymph node biopsy has been made, below knee skin biopsy, bone marrow biopsy, lung tomography and nuclear medicine reports have been asked. There are findings which central necrotic environment of the lymph nodes with granulomatous inflammation, therefore, biopsy of left leg conforms with utricorial vasculitis. Also Splenomegaly and lymph nodes' s eclipt has been watched. Calcificated lymph nodes' s has shown diffusional spread as it can be seen on lung tomography at medial stations, this location recommended for research. At these locations lymph nodes which is max 19,7 mm ratio at the shape of calcification glomus has been spotted. At the some segments of right lung widespread peribronchovascular consolidated areas were seen together with frosted glass scenes. Again at the right lung nodular infiltrations and proliferated branch scenes has been watched.



RESULT: Sarcoidosis is a multisystemic disease which might affect whole organs and systems. The approach to this disease has to be multidisiplinary. Here, the sarcoidosis with a multisystemic attitude which comes together with myelodisplastic syndrome is presented.

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POSTER BİLDİRİ/POSTER PRESENTATION 3.

FACTORS RELATED WITH SIX MONTHS OF PROGNOSIS IN HEROIN ADDICTION

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Aim: Opioid addicts find it difficult to cope with withdrawal periods and the desire to drink, and often begin to use drugs again. So far, the number of studies investigating the factors affecting the relapse of opioid dependence is not sufficient. The severity of opioid withdrawal, craving scores, the age of onset of substance use, and other factors related to the prognosis of disease may be important factors in determining treatment strategies. In this study we investigated the factors leading to early shift in patients with opioid dependence.

Methods: In this study, the patients who were treated with the diagnosis of opioid dependence in the clinic of AMATEM (Alcohol Treatment and Training Center) in Sakarya between 2016-2018 were included in the study. Clinical records of 52 patients and relapse rates in first 6 months were evaluated. Remission and relapse groups were compared with Mann Whitney U test.

Results: The mean age of the patients was 29.40 ± 7.93 years, 94.9% of the patients were male (n = 49), 5.9% (n = 3) were university graduates, 25% (n = 13) was still married and 25% (n = 13) had a regular job. The mean age of substance first use was 16.35 ± 4.39 (10-29) and the mean age of first use of heroin was 21.20 ± 4.80 (14-30). The mean craving scores were 20.67 ± 8.50 at the entrance, 8.09 ± 6.26 at discharge, and the opioid withdrawal scale score at the 2nd day was 6.09 ± 4.11 . The relapse groups (n = 19) substance use onset age was significantly earlier than the remission group (n=14). ($18,93 \pm 5,69$; $15,74 \pm 3,97$, $p < 0.05$)

Conclusion: This study showed that the most important prognostic factors in heroin addicts were age at onset of substance use. Early age of onset is associated with poor prognosis.

Key Words; opioid, addiction, relapse

POSTER BİLDİRİ/POSTER PRESENTATION 4.

DOĞUMSAL KALP HASTALIKLARINDA ERKEN TANI

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ÖZET

Amaç:

Yenidoğanlarda en sık görülen konjenital anomaliler, doğumsal kalp hastalıklarıdır. Çalışmamızda; Yenidoğan döneminde solunum sıkıntısı, huzursuzluk şikayetleriyle çocuk kliniğine başvuran olguların, dikkatli ve ayrıntılı fizik muayene ile, doğumsal kalp hastalıkları açısından erken tanı/tedavi oranlarının yükseltilmesi amaçlanmıştır.

Gereç ve Yöntem:

Ağlama, huzursuzluk, burun tıkanıklığı nedeniyle polikliniğimize başvuran hasta, fizik muayene ve tetkikler sonrası kalp yetmezliği ve solunum sıkıntısı teşhisiyle yenidoğan yoğun bakım ünitesinde izleme alınmıştır.

Bulgular:

Miadında 3760gr olarak doğan erkek bebeğin postnatal izleminin 23. gününde burun tıkanıklığı, solunum sıkıntısı şikayetleri vardı. Ayrıntılı fizik muayenesi yapılan hastada, nazal konjesyon, taşikardi, üfürüm, subkostal çekilme, solunum sıkıntısı bulguları tespit edildi. Üst solunum yolu enfeksiyonu, konjenital kalp hastalığı, kalp yetmezliği ön tanılarıyla yenidoğan yoğun bakım ünitemize yatırıldı.

Yapılan ekokardiyografi sonucu; ventriküler septal defekt(VSD) ve geniş sekundum atrial septal defekt(ASD) tanısı konuldu.

Yoğun bakım ünitemizde uygulanan tedaviyle, solunumu rahatlayan, kalp yetmezliği bulguları gerileyen genel durumu düzelen ve kan kültüründe üremesi olmayan hasta, çocuk kardiyolojisi kliniği takibine alındı. Operasyon planlanmak üzere taburcu edildi.

Sonuç:

Yenidoğan döneminde doğumsal kalp hastalığı bulguları farklılık gösterebileceği ve hatta hiçbir bulgu vermeyebileceği için şüphe duyulan hastalarda mutlaka ekokardiyografik inceleme yapılmalıdır. Erken kardiyolojik değerlendirme kalp hastalıklarının erken tanı ve tedavisinde çok önemlidir.

Yenidoğan muayenesi yapan çocuk hekimleri ve aile hekimleri, dikkatli fizik muayene ile herhangi bir semptomu olmayan doğumsal kalp hastası olgularında bile erken tanı ve tedavi sağlayabilirler.

Anahtar kelimeler: Yenidoğan, doğumsal kalp hastalıkları,

GİRİŞ VE KURAMSAL ÇERÇEVE

Doğumsal kalp hastalıkları (KKH) hayatın ilk yıllarında en sık rastlanan doğumsal anomalilerdir. İnsidansı 1000 canlı doğumda 0,6-1 arasında değişmektedir. Ülkemizde yapılan bir çalışmada doğumsal kalp hastalığı sıklığı ilk bir haftada 1000 canlı doğumda 5 saptanmış iken, Orta Anadolu bölgesinde yapılan diğer bir çalışmada ise 1000 canlı doğumda 7,7 saptanmıştır [1-3].

Doğumsal kalp hastalıkları yenidoğan döneminde görülen en sık doğumsal anomalilerdir, fakat yaşamın ilk günlerinde hiçbir semptom vermeyebilir. Hatta bu dönemde hastalar siyanoz, şok gibi ciddi bulgular ile başvuracağı gibi huzursuzluk, beslenememe gibi nonspesifik bulgular ile de başvurabilir. Özellikle yenidoğan döneminde hemodinamik değişikliklerin hızlı olması nedeniyle tanı ve tedavi için kardiyolojik değerlendirme çok önemlidir [4,5].

Yenidoğan bebeklerde üfürüm duyulması doğumsal kalp hastalığının en önemli belirtisidir. Zamanında doğan bebeklerde duyulan üfürümlerin %50'sinden fazlası masum üfürümlerdir. Masum üfürümlerin ise en sık nedeni PDA ve pulmoner darlık gibi pulmoner akım üfürümleridir [6,7].

AMAÇ

Çalışmamızda; Yenidoğan döneminde solunum sıkıntısı, huzursuzluk şikayetleriyle çocuk kliniğine başvuran olguların, dikkatli ve ayrıntılı fizik muayene ile, doğumsal kalp hastalıkları açısından erken tanı/tedavi oranlarının yükseltilmesi amaçlanmıştır.

KAPSAM VE YÖNTEM

Ağlama, huzursuzluk, burun tıkanıklığı nedeniyle polikliniğimize başvuran hastaya, ayrıntılı fizik muayene, kan tahlili ve diğer tetkikler ile ekokardiyografi yapılmış olup, yenidoğan yoğun bakım ünitemizde 7 gün tedavi uygulanmıştır.

BULGULAR

Miadında doğan 3760gr erkek bebeğin postnatal izleminin 23. gününde burun tıkanıklığı, solunum sıkıntısı şikayetleri vardı. Ayrıntılı fizik muayenesi yapılan olgu, taşikardi, üfürüm, subkostal çekilme, solunum sıkıntısı, üst solunum yolu enfeksiyonu, konjenital kalp hastalığı, kalp yetmezliği ön tanılarıyla yenidoğan yoğun bakım ünitemize yatırıldı.

Geliş fizik muayenesinde genel durum orta –kötü, ajite, solunum taşipneik, dispneik , solunum sesleri kaba ve kreptan ralleri mevcuttu. Subkostal ve interkostal çekilmeleri vardı. Batın rahattı, kot altında 2cm hepatomegali tespit edildi. Sarı yeşil renkli burun akıntısı vardı.

Yapılan ekokardiyografi sonucu; VSD, geniş sekundum ASD tanısı konuldu.

Yoğun bakım tedavisi ile, solunumu rahatlayan, kalp yetmezliği bulguları gerileyen genel durumu düzelen ve kan kültüründe üremesi olmayan hasta, çocuk kardiyolojisi kliniği takibine alındı. Operasyon planlanmak üzere taburcu edildi.

SONUÇ

Yenidoğan döneminde doğumsal kalp hastalığı bulguları farklılık gösterebileceği ve hatta hiçbir bulgu vermeyebileceği için şüphe duyulan hastalarda mutlaka ekokardiyografik inceleme yapılmalıdır. Erken kardiyolojik değerlendirme kalp hastalıklarının erken tanı ve tedavisinde çok önemlidir.

Yenidoğan muayenesi yapan çocuk hekimleri ve aile hekimleri, dikkatli fizik muayene ile herhangi bir semptomu olmayan doğumsal kalp hastası olgularında bile erken tanı ve tedavi sağlayabilirler.

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POSTER BİLDİRİ/POSTER PRESENTATION 5.

**ALK (+) LUNG ADENO CA ON GOOD RESPONSE TO ALECTINIB TREATMENT:
CASE REPORT**

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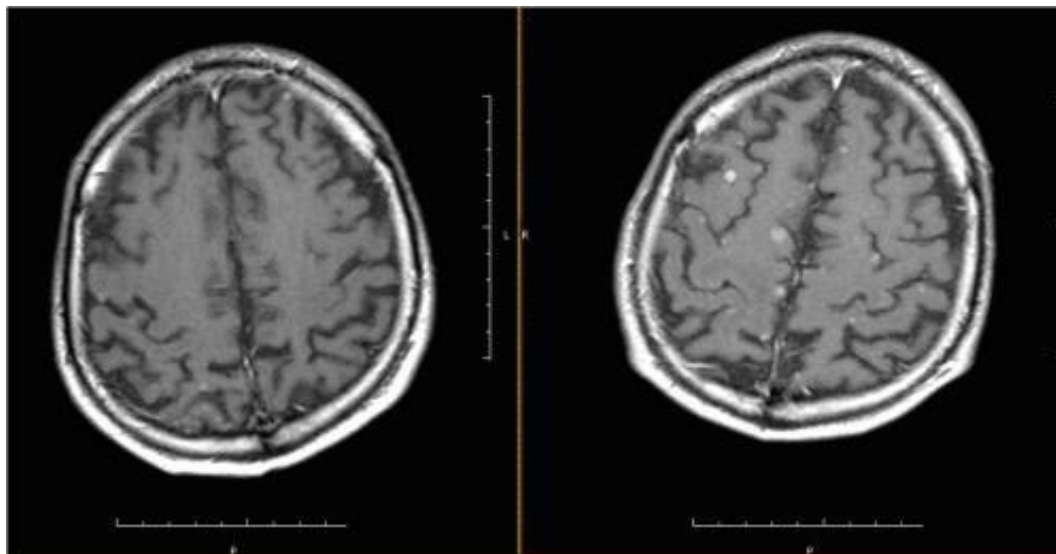
Introduction: Lung cancer is one of the most common cancer in the world with many types. ALK is a receptor responsible for cell proliferation encoded by the ALK gene in humans. ALK can fuse lung cancers with EML-4 protein and trigger lung cancers¹. Patients with ALK positivity are more likely to develop brain metastasis. At the time of diagnosis, approximately 20% of these patients have brain metastasis. In patients with ALK-positive lung cancer, agents such as Crizotinib, Ceritinib, Alectinib, Brigatinib, Lorlatinib have been used as systemic treatment nowadays.² In this case report, we aimed to present a patient who have ALK mutation positive Lung cancer and brain metastasis and also have good response to the treatment of Alectinib without any local procedure.

Case: A 61 years-old patient presented with cough and sputum. After Computed Tomography imaging and bronchoscopic biopsy Lung Adenocarcinoma was diagnosed. First line cisplatin and navelbine chemotherapy treatment has resulted in progression. Brain metastasis were found by Cranial Magnetic Resonance Imaging. ALK mutation was detected and Alectinib treatment started. After 1 month, the patient developed a near complete response to therapy and treatment continued

Discussion: Alectinib is a third generation, tyrosine kinase inhibitor. Alectinib blocks the mutant, abnormal ALK protein. Approximately 30% of patients with ALK positive metastatic lung adenocarcinoma included in phase studies had measurable brain metastasis and efficacy of treatment was evaluated without local treatment for these patients. According to the meta-analysis of the largest Phase 3 studies, outcome of the patients with brain metastasis has comparable results, without whole-brain irradiation. Our case is presented in the light of the literature for draw attention to the local treatments in ALK positive, brain metastatic, lung adenocarcinoma patients and local treatments such as whole-brain irradiation may be delayed if the patient has asymptomatic disease.³



Keywords: Lung cancer, ALK /EML-4, Alectinib, brainmetastasis



Source:

¹G. Li, W.-R. Dai, F.-C. Shao “Effect of ALK-inhibitors in the treatment of non-small cell lung cancer: a systematic review and meta-analysis” *Eur Rev Med Pharmacol Sci* 2017; 21 (15): 3496-3503

²Costa DB, Shaw AT, Ou SH, Solomon BJ, Riely GJ, Ahn MJ, et al. Clinical Experience With Crizotinib in Patients With Advanced ALK-Rearranged Non-Small-Cell Lung Cancer and Brain Metastases. *J Clin Oncol.* 2015; 33(17):1881–8. JCO.2014.59.0539 PMID: 25624436

³Petrelli F, Lazzari C, Ardito R, Borgonovo K, Bulotta A, et al. “Efficacy of ALK inhibitors on NSCLC brain metastases: A systematic review and pooled analysis of 21 studies”. *PLoS One.* 2018 Jul 27;13(7):e0201425. doi: 0.1371/journal.pone.0201425

POSTER BİLDİRİ/POSTER PRESENTATION 6.

**REPORT OF A RARE CASE: GANCYCLOVIR ALLERGY IN A PATIENT WITH
CONGENITAL CMV**

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INTRODUCTION:

Cytomegalovirus (CMV) is from Herpesviridae family, also known as Herpes virus 5, and it causes infection only in humans. Congenital CMV infection prevalence is 0.6% in general population of developed countries and it may cause sensorineural hearing loss and long-term neurodevelopmental disorders. After birth, it is presented with a symptomatic or asymptomatic clinical picture, or isolated sensorineural hearing loss. One of the medications used in the treatment of congenital CMV is Ganciclovir. Although ganciclovir is known to suppress bone marrow, it has not been previously reported to cause (type I, IgE- mediated) hypersensitivity reaction.

AIM:

Anaphylactic reaction caused by ganciclovir treatment in our congenital CMV patient is presented, because it is rarely seen and to increase the awareness of allergy to ganciclovir.

CASE:

A 67-day-old male patient with congenital CMV. At the outside center, six weeks of 12 mg / kg / day ganciclovir treatment was planned. At 33rd day of intravenous ganciclovir treatment, he was admitted into our service. There was no systemic involvement (cerebral calcification, retinitis, hepatosplenomegaly, etc.) requiring the use of the medication at the beginning of treatment. General condition was well and physical examination was normal. There was no specific finding in perinatal history. In the family history, his mother has common variable immunodeficiency (CVID). Ganciclovir treatment was initiated at the 24th gestational week due to the mother's CVID history and the risk of possible disease development in the child. The amniocentesis was performed at 28th week and the viral load was 900,000 CMV copies / ml

with RT-qPCR. On the 33rd day of his therapy, no complications was observed after the first dose. Thirty minutes after the second dose the patient developed an urticarial rash, stridor, tachypnea and his blood pressure was 79/58 mmHg. Anaphylaxis was considered because of two system findings. Intramuscular adrenaline and prednisolone for the anaphylaxis; inhaler adrenaline was applied for the respiratory distress. Skin prick test and intradermal test were negative. However, the treatment was stopped due to the reaction. The patient's viral load was planned to be checked 15 days after discharge. When control viral load was 1,700 copies / ml and there was no organ involvement, treatment was discontinued. Intermittent check-up for viral load was planned during follow-up.

CONCLUSION:

Ganciclovir treatment in our congenital CMV patient was observed to cause immediate (IgE-mediated) hypersensitivity reaction.

Key words: Cytomegalovirus, Gancyclovir, anaphylaxis, drug allergy.

POSTER BİLDİRİ/POSTER PRESENTATION 7.

MEDICAL STUDENTS, LANGUAGE AND REFUGEES

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Introduction: The right to health is a universal right adopted in the United Nations Convention on Human Rights (Article 25). Although many refugees are deprived of their right to health, one of the most important reasons is the language problem.

Objective: Our country, which is located in the middle of the Middle East, the Balkans and the Caucasus, has been subjected to migrations due to the problems experienced in its environment for 100 years. The biggest wave of migration in recent years came from the south due to the Syrian civil war in April 2011. 4 million people have taken refuge in our country and have been granted temporary protection. This population, which corresponds to 5% of our population, has affected all of our provinces, mainly our southern provinces, and hence our health system. We aimed to reflect the general perspective of the physician's candidates who will participate in the health service after a few years.

Methods: 17 questions were asked with the online questionnaire with the Google Forms application. The questions were prepared by searching the literature and by the suggestions of the study team. Students from various medical faculties including Sakarya University Faculty of Medicine participated in the questionnaire. The survey was open for a total of 72 hours. The graphs of the findings were obtained. The data were entered into the SPSS statistical program.

Results: A total of 155 students attended the study. There was a balanced distribution with student participation from each semester. Turkey's health policy failed to find student ratio was 40%. The percentage of those who thought that a good health care service was given to the refugees was 63.8%. The students who had the idea that the physicians were not treated differently from the Turkish patients were found to be 54.8%. As a result of the communication problem that will occur due to language malpractice occurs 37.4% of students feel responsible for this 36.8% of the responsible said they would not feel responsible. Refugees; If it came from



the Caucasus or the Balkans rather than from the Middle East, the percentage of those who said that their perspective would change was 23.9%. An overview of the asylum seekers was neutral with 41.3%. After making the Hippocratic oath, the ratio of those who said that current thoughts would not change was 54.2%.

Discussion: The generation of Z is reflected in the present and the future. The perspective of our future physicians, language and asylum seekers has been discussed.

Keywords: Medical Student, Refugees, Language, Hippocratic Oath.

POSTER BİLDİRİ/POSTER PRESENTATION 8.

A VERY RARE CASE: COMPLETE AV BLOCK INDUCED BY CHRONIC CONSUMPTION OF ALCOHOL

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ABSTRACT

Introduction and aim: Alcohol is a toxic substance that is widely consumed, the extreme consumption of alcohol itself or its metabolites causes cardiomyopathy. Third-degree heart block or complete heart block is an abnormal heart rhythm resulting from a defect in the cardiac electrical system leading to complete dissociation of the atria and ventricles. AV block due to acute alcohol exposure has been reported in the literature. In most of these cases AV block has been improved spontaneously without leaving a toxic effect. At the same time, information about permanent infra-his AV block development due to chronic alcohol exposure without alcoholic cardiomyopathy is very limited. In this study report we aim to present a 37-old patient who was admitted to the hospital with the diagnosis of AV block in his ECG and diagnosed with third-degree AV block due to chronic alcohol intake in large amounts.

Case presentation: The patient with blood pressure of 60/40 mmHg was in cardiogenic shock. Pulse rate was 28 beats / min. The complete AV block was indicated on the ECG record. No additional sound or murmur was heard in the auscultation of the patient except for the bradycardic heart sounds. Examination of other systems did not reveal any pathologies . The patient was taken to the catheter's lab and a temporary pacemaker was implanted due to AV complete block and accompanying hemodynamic impairment. Electrophysiological study was planned after intermittent 2nd degree AV block in the service follow-up of the patient

who returned to sinus rhythm on the second day. In the electrophysiological study performed on the 8th day of admission, AH distance was measured as 60 and HV distance was measured as 100. HV block recorded with rapid atrial pacing. Having a permanent DDD pacemaker implanted showed significant improvement on complete AV block.

Discussion: In this rare case report, we discussed complete AV block due to chronic alcohol consumption and its treatment.

Key Words: Cardiomyopathy; Complete AV block; Permanent Pacemaker

NADİR GÖRÜLEN BİR OLAY: KRONİK ALKOL KULLANIMINA BAĞLI AV TAM BLOK

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GİRİŞ

Alkol, yaygın tüketilen toksik bir madde olup aşırı tüketimi dilate kardiyomiyopatiye benzer klinik özellikler gösteren kardiyomiyopati ile ilişkilendirilmiştir. Kardiyomiyopati gelişiminde alkolün kendisi ya da metabolitleri sorumlu tutulmaktadır (1) . Atriyoventriküler (AV) tam blok atriyum ve ventrikül arasındaki elektriksel iletinin kesilmesine bağlı olarak gelişen iletim bozukluğudur. Literatürde akut alkol maruziyetine bağlı AV blok bildirilmiştir (2,3). Kronik alkol maruziyetinin AV düğümü üzerine etkisi tam olarak bilinmemektedir. Bu yayınımda kronik alkol maruziyetine bağlı tam AV bloğu gelişen ve kalıcı kalp pili implante edilen bir hastayı sunduk.

OLGU SUNUMU:

Presenkop şikayeti ile alkol etkisinde acile sedye ile gelen 37 yaşında erkek hasta, çekilen EKG sinde AV tam blok (Resim1) saptanması üzerine koroner bakım birimine yatırıldı. Hastanın ayrıntılı klinik hikayesinde kronik aşırı alkol kullanımı dışında bir özellik yok idi. AV düğümü üzerine etkili kronik ilaç kullanım öyküsü yoktu. Tansiyonu 60/40 mmHg olan hasta kardiyojenik şok tablosundaydı. Nabız hızı 28 atım/dk olan hastanın oskültasyonunda bradikardik kalp seslerinin dışında ek ses ya da üfürüm duyulmadı. Diğer sistemlerin muayenesinde özellik saptanmadı.

AV tam blok ve eşlik eden hemodinamik bozukluk nedeniyle hasta kateter laboratuvarına alınarak geçici kalp pili takıldı. Takip eden ikinci günde sinüs ritmine dönen hastanın servis izleminde aralıklı 2. derecede AV bloğu gözlenmesi üzerine elektrofizyolojik çalışma planlandı. Yatışının 8. gününde yapılan elektrofizyolojik çalışmada AH mesafesi 60, HV mesafesi 100 ölçüldü (Resim 2) . Hızlı atriyel pacing ile HV blok kaydedildi. Hastada kalıcı his düğümü hastalığı olduğu düşünülerek ve kalıcı pil takılmasına karar verildi. DDD pacemaker takılan hasta kardiyoloji poliklinik kontrolü önerisi ile taburcu edildi.

TARTIŞMA:

Bu vaka sunumunda kronik alkol tüketimine bağlı gelişen tam AV blok tartışılmaya çalışılmıştır. Literatürde akut alkol maruziyetine bağlı AV blok bildirilmiş olup bu olguların çoğunda toksik etkinin ortadan kaybolması takiben AV blok düzelmiştir. Bununla birlikte, alkolik kardiyomiyopati olmaksızın, kronik alkol maruziyete bağlı kalıcı infra-his AV blok gelişimine ilişkin veriler çok sınırlıdır (4). Bu vaka takdiminde oldukça nadir görülen bu durum ve tedavisi sunulmuştur.

Anahtar Kelimeler: Alkol, Kardiyomiyopati, AV tam blok, Pacemaker

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POSTER BİLDİRİ/POSTER PRESENTATION 9.

Toll-like Receptor (TLRs) Activity in Metastatic Prostate Cancer and Association with Apoptosis

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Introduction and Aim: Toll-like receptors (TLR) are the family of receptors involved in the formation of immune response in the immune system. Metastatic prostate cancer is the type of cancer with poor prognosis associated with lymph node and bone metastasis. When TLRs are stimulated by their ligands, they contribute to the promotion of inflammatory response through their associated signaling pathways. The activity of the signaling pathways associated with TLR3, TLR4 and TLR9 receptors in the metastatic prostate cancer is known in the literature. However the differences between these TLRs activities and their relationship with apoptosis have not been elucidated yet. The aim of the study was to determine the differences between the activity of TLR3, TLR4 and TLR9 receptors and their relationship with apoptosis in metastatic prostate cancer.

Method: In order to activate TLR3, TLR4 and TLR9 receptors, the non-toxic effective dose (1-5 μ M) of each TLR-specific ligand (Poly I:C, LPS and CpG-ODN, respectively) was determined by WST-1 analysis. In order to determine the relationship between TLRs and apoptosis, TLR3, TLR4, TLR9, Bcl-2 and Bax gene expression levels were assessed by RT-PCR.

Results: WST-1 results showed that the most effective non-toxic concentration was determined as 5 μ M for the activation of TLR3, TLR4 and TLR9 receptors. As a result of TLR3 receptor activity, the expression levels of Bcl-2 and Bax increased by 25.4- and 44.0-fold, respectively. Furthermore the expression level of the Bax increased by 3.8- and 3.3-fold after the activation



of TLR4 and TLR9 receptors, respectively. On the other hand, the expression level of Bcl-2 was decreased by 4.9-fold following the activation of TLR9 receptor.

Conclusions: Apoptosis can be induced by stimulation of various TLRs. In this study different activities of TLR3, TLR4 and TLR9 receptors have differently affected the expression levels of Bcl-2 and Bax genes in the progression of metastatic prostate cancer. However, further researches are required to investigate the underlying molecular mechanisms of apoptotic death caused by the activation of the each TLR.

Key Words: TLR, Prostate Cancer, Apoptosis, Inflammatory response

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POSTER BİLDİRİ/POSTER PRESENTATION 10.

RESIDENCY PREFERENCE OF MEDICAL STUDENTS

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AIM: In this study, it was aimed to evaluate the preference of medical students in residence departments and opinions at violence in medical sector in the Faculties of Medicine at Sakarya University, Ege University, Gazi University, Selçuk University and On Dokuz Mayıs University.

METHODS: This study was prepared according to the results of the survey conducted in electronic environment between 04.03.2019 - 14.03.2019. This survey was delivered to students through the university representatives. 236 female and 181 male students participated in the survey.

FINDINGS: The first three preference of the 1st year medical students, with average age of 19 years old, cardiovascular surgery, pediatric health and diseases, obstetrics and gynecology. 64% of the students are thinking about academic career, 38% of them do not think of the same department when they come to the faculty, 69% of them come to the medical faculty voluntarily, 47% of them chose their medical residence departments because of the curiosity, 64% of them want to perform their residency in Turkey, after having residency they prefer to work in Marmara, Mediterranean and Black Sea Regions respectively, 90% of them want to continue their professional life in the clinic, 45% of them find the medical education inadequate, 76% do not think the TUS score ranking is right, 28% of them think violence in health is effective in the selection of residency and 61% of them think that unconscious patient and patient relatives are the cause of the violence.

The first three preference of 2nd year medical students, which average age of 20 years old, are cardiovascular surgery, pediatric surgery, mental health and diseases. 67% of the students are thinking about academic career, 41% of them do not think of the same department when they come to the faculty, 72% of them come to the medical faculty voluntarily, 56% of them chose their medical residency departments because of the curiosity, 71% of them want to perform their profession in Turkey, after having residency they prefer to work in Marmara, Aegean and Black Sea Regions respectively, 91% of them want to continue their professional life in the clinic, 41% of them find the medical education inadequate, 80% do not think the TUS score ranking is right, 34% of them think violence in health is effective in the selection of residency and 61% of them thinks unconscious patient and patient relatives are the cause of the violence.

RESULT: In our study related to Medical Residency Departments which cover the first three classes of Medical Faculties, the department they intend to choose in general has a wide range of changes. we conclude that the majority of the students choose the faculty in accordance with their own wishes, and the main reason for their choice is their curiosity and they want to perform their future professions in the western regions and clinical departments. At the same time, it is considered that most of the participating students think that TUS score ranking is incorrect. In the preference of residency, they noted that violence in health has a great effect and they see the cause of this violence is unconscious patients and their relatives.

TIP FAKÜLTESİ ÖĞRENCİLERİNİN TIPTA UZMANLIK BÖLÜMLERİNE İLGİSİ

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AMAÇ: Bu çalışmada Sakarya Üniversitesi, Ege Üniversitesi, Gazi Üniversitesi, Selçuk Üniversitesi ve On Dokuz Mayıs Üniversitesi Tıp Fakültelerindeki dönem öğrencilerinin tıpta uzmanlık bölümlerine ilgisi; bununla birlikte sağlık şiddet hakkındaki görüşlerinin değerlendirilmesi amaçlanmıştır.

YÖNTEM: Bu çalışma 04.03.2019 - 14.03.2019 tarihleri arasında elektronik ortamda yapılan anket sonuçlarına göre hazırlanmıştır. Bu anket üniversitelerdeki dönem temsilcilikleri aracılığıyla öğrencilere ulaştırılmıştır. Ankete 236 kadın 181 erkek öğrenci katılımı sağlanmıştır.

Yaş ortalaması 19 olan tıp fakültesi dönem 1 öğrencilerinin; Seçmeyi düşündükleri ilk 3 bölüm kalp ve damar cerrahisi, çocuk sağlığı ve hastalıkları, kadın hastalıkları ve doğumdur. Öğrencilerin %64'ünün akademik kariyer yapmayı düşündüğü, %38'inin fakülteye geldiğinde düşündüğü bölümü düşünmediği, %69'unun tıp fakültesine kendi isteğiyle geldiği, %47'sinin bölümü seçme sebebinin merak olduğu, %64'ünün mesleğini yurt içinde icra etmek istediği, meslek sahibi olduktan sonra sırasıyla en çok Marmara, Karadeniz ve Akdeniz bölgelerinde çalışmak istedikleri, %90'ının meslek hayatına klinikte devam etmek istediği, %45'inin verilen tıp eğitimini yeterli bulmadığı, %76'sının TUS'taki puan sıralamasını doğru bulmadığı, %28'inin bölüm seçiminde uygulanan şiddetin etkili olduğu ve %61'inin ise uygulanan şiddetin sebebi olarak bilinçsiz hasta ve hasta yakınlarını gösterdiği verilerine ulaşılmıştır.

Yaş ortalaması 20 olan tıp fakültesi dönem 2 öğrencilerinin; Seçmeyi düşündükleri ilk 3 bölüm kalp ve damar cerrahisi, çocuk cerrahisi, ruh sağlığı ve hastalıklarıdır. Öğrencilerin %67'sinin akademik kariyer yapmayı düşündüğü, %41'inin fakülteye geldiğinde düşündüğü bölümü düşünmediği,

%72'sinin tıp fakültesine kendi isteğiyle geldiği, %56'sının bölümü seçme sebebinin merak

olduđu,

%71'inin mesleđini yurt içinde icra etmek istediđi, meslek sahibi olduktan sonra sırasıyla en çok Marmara, Ege ve Karadeniz bölgelerinde çalışmak istedikleri, %91'inin meslek hayatına klinikte devam etmek istediđi, %41'inin verilen tıp eğitimini yeterli bulmadıđı, %80'inin TUS'taki puan sıralamasını doğru bulmadıđı, %34'ünün bölüm seçiminde uygulanan şiddetin etkili olduđu ve

%61'inin ise uygulanan şiddetin sebebi olarak bilinçsiz hasta ve hasta yakınlarını gösterdiđi verilerine ulaşılmıştır.

Sonuç: Tıp Fakülteleri ilk üç dönem öğrencilerini kapsayan Tıpta Uzmanlık Bölümleri ile ilgili çalışmamızda genel olarak seçmeyi düşündükleri bölümün geniş bir aralıkta deđişiklik gösterdiđinden fazlasının akademik kariyer yapmak istediđi, dönemler ilerledikçe bölümler hakkında bilgi sahibi oldukça fakülteye geldiklerinde akıllarında belirledikleri uzmanlık bölümünün dönemle doğru orantılı olarak deđişiklik gösterdiđi, büyük çoğunluğun fakülteyi kendi isteđi doğrultusunda seçtiđi ve seçmelerindeki ana sebebin merak olduđu, gelecekteki mesleklerini daha çok batı bölgelerde ve klinik bölümlerde icra etmek istedikleri sonucuna varmaktayız. Aynı zamanda katılım gösteren öğrencilerin çoğunun TUS puan sıralamasının olması gerektiđi gibi olmadıđını düşünmektedir

Seçilecek uzmanlık bölümünde ise sağlıkta şiddetin büyük oranda etki ettiđini ve bu şiddetin sebebinin, bilinçsiz hasta ve hasta yakınları olarak gördüklerini belirtmişlerdir.

POSTER BİLDİRİ/POSTER PRESENTATION 11.

**CALCIUM PYROPHOSPHATE DEPOSITION DISEASE COEXIST
WITH OSTEOARTHRITIS: A CASE REPORT**

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Aim

The diagnosis of CPPD is often a delayed because the symptoms are commonly mistaken for other types of arthritis including osteoarthritis, rheumatoid arthritis, and gout. Our aim is to present a case with calcium pyrophosphate deposition disease coexist with osteoarthritis.

Case Description

A 59-year-old female patient presented with complaints of pain, swelling and stiffness on her knees for 5 to 6 years, which had intensified. On physical examination, swelling was observed in both knees. When knee radiography was examined, chondrocalcinosis and osteophytes were detected in lateral meniscus cartilage in both knees.



Results&Conclusion

Pseudogout affects about 3% of people in the 60s and almost half of those in the 90s. The patient was diagnosed as osteoarthritis with calcium pyrophosphate disease. The accumulation of calcium phosphate crystals in the joint fluid can cause a painful attack by pulling the white blood cells to the site. The diagnosis of calcium pyrophosphate deposition disease is largely based upon the demonstration of CPP crystals in tissue or synovial fluid and/or upon radiographic evidence of the disease. In the X-ray of the joint, it can be seen whether calcium-containing deposits exist in cartilage. This image in the radiography is also called as direct chondrocalcinosis. There is no specific treatment to dissolve crystal deposits. Treatment, therefore, is focused on the alleviation of symptoms and the avoidance of future attack.

Keywords

Calcium phosphate crystals, chondrocalcinosis, pseudogout, knee joint, osteophyte.

POSTER BİLDİRİ/POSTER PRESENTATION 12.

PDetermining the Levels of University Students' Knowledge on Cervical Cancer, HPV and Its Vaccination

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Aim: Cervical cancer is the second most frequent cause of mortality among cancers that are seen in women at the ages of 15-44. The prevalence of HPV in cases of cervical carcinoma in the entire world was reported as 99.7%. HPV infection most frequently is transmitted as a result of sexual relationships with an infected person by after the individual's sexually active period starts. Its peak point in the population is usually the age range of 20-25. Vaccination is recommended before contact with HPV. This study was designed with the purpose of determining the awareness, knowledge levels and attitudes of medicine students on cervical cancer, its relationship with HPV and vaccination for HPV.

Material and Method: The study included 212 medicine students who were enrolled at the Faculty of Medicine at Sakarya University between the dates of January and March 2019. A questionnaire form that was developed by the researchers in the light of the literature was used to collect information about the sociodemographic characteristics of the participants and their awareness and knowledge levels on cervical cancer, its relationship with HPV and vaccination for HPV.

Results: The mean age of the students who participated in the study was found as 20.65±1.95. Table 1 shows the demographic characteristics of the participants. 79.1% of the participants responded to the question 'Can viruses be a cause of cancer?' as 'no, they cannot.' 57.2% stated that there is a relationship between cervical cancer and HPV infection. The methods that were known as methods for being protected from HPV were listed as HPV vaccination(45.3%), condoms(44.3%), monogamy(38.7%) and getting smear tests done regularly(43.4%). Table 2

summarizes the results on the questions regarding HPV infection and risk factors. We found that 70.1% of the participants had heard of HPV vaccination, 55.9% though vaccination is protective, and 97% did not get vaccinated for HPV. It was observed that 61.8% did not receive education about HPV infection and vaccination, and 85.4% wanted to receive education about HPV infection, HPV vaccination and cervical cancer.

Conclusion: Students of Faculty of Medicine do not have sufficient knowledge on the relationship between cervical cancer and HPV, protection from HPV and HPV vaccinations. In order to increase the knowledge levels and awareness of students, this topic should be included in the curricula starting with the initial years of studying at the faculty.

Keywords: Cervical cancer, HPV infection, HPV vaccination, Knowledge levels

Table 1: Demographic characteristics of the participants (n=212)

Variables		n	n %
Class	1	69	32.7%
	2	28	13.3%
	3	56	26.5%
	4	36	17.1%
	5	15	7.1%
	6	7	3.3%
Gender	Female	121	59.6%
	Male	82	40.4%
Smoking	Yes	19	9.3%
	No	186	90.7%

Table 2: Results on the questions regarding HPV infection and risk factors

		n	%
Have you heard about HPV infection before?	Yes	180	84.9%
	No	32	15.1%
Do you know how HPV is transmitted?	Yes	145	68.4%
	No	67	31.6%
Do you know that there is a relationship between HPV and early sexual relations?	Yes	131	62.1%
	No	80	37.9%
Do you know that there is a relationship between HPV and polygamy?	Yes	151	71.2%
	No	61	28.8%
Do you know about the relationship between HPV and genital warts?	Yes	128	61.2%
	No	81	38.8%
Do you know that genital warts may lead to cervical cancer?	Yes	111	52.4%
	No	101	47.6%
Do condoms protect the person from genital warts by 100% ?	Yes	11	5.4%
	No	192	94.6%
Do you know that HPV vaccination protects the person from cervical cancer?	Yes	114	55.9%
	No	90	44.1%

POSTER BİLDİRİ/POSTER PRESENTATION 13.

Otizimli Çocuklarda Akut ve Kronik Hastalıkların Görülme Sıklığının Araştırılması

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Özet

Amaç: Otizm spektrum bozukluğu, doğuştan gelen ya da yaşamın ilk yıllarında ortaya çıkan karmaşık bir nöro-gelişimsel bir bozukluktur. Bu çalışmada Sakarya Otistik Çocukların Eğitim Merkezi'nde eğitim gören otizimli bireylerin hastalık durumlarını belirlemek amaçlanmıştır.

Materyal ve Metot: Literatür ışığında otizimli bireylere ait demografik bilgiler ve 17 sorudan oluşan bir anket formu hazırlanmıştır. Bu anket otizimli çocukların velilerine uygulanmıştır. 24 erkek ve 6 kız olmak üzere toplam 30 otizimli bireyin velileri araştırmaya dâhil edilmiştir.

Bulgular: Ankete katılan velilerin otizimli çocuklarının yaş ortalaması erkeklerde $11,08 \pm 2,91$ ve kızlarda $9,50 \pm 2,07$ bulunmuştur. Otizimli çocukların boyları erkeklerde $144,45 \pm 19,08$ iken, kızlarda $132,67 \pm 14,17$ bulunmuştur. Vücut ağırlıkları erkeklerde $49,79 \pm 30,23$ ve kızlarda $35,83 \pm 14,67$ olarak bulunmuştur. Ailelere “Doğumsal hastalığım olup olmadığı” sorulmuş ve erkek çocukların aileleri %91,67 ve kız çocukların aileleri %83,33 hayır cevabını vermişlerdir. Şu sorular sorulmuştur: Çocuğunuz çok sık hastalanır mı? Çocuğunuz hastalandığı zaman çok uzun sürer mi? Çocuğunuz hastalandığı zaman ilaç kullanıyor musunuz? Çocuğunuz hastalandığı zaman ilaç veriyorsanız ilaç vermekte zorlanıyor musunuz? Çocuğunuza verdiğiniz ilaçların farklı yan etkiler oluşturduğunu düşünüyor musunuz? Çocuğunuz kızamık geçirdi mi? Çocuğunuz kabakulak geçirdi mi? Çocuğunuz suçiçeği geçirdi mi? Çocuğunuz zatürre geçirdi mi? Çocuğunuz idrar yolları enfeksiyonu geçirdi mi? Çocuğunuzun astımı var mı? Çocuğunuz sık epilepsi (nöbeti) geçirir mi? Çocuğunuzda kronik böbrek yetmezliği var mı? Çocuğunuzda diyabet var mı? Çocuğunuzda obezite var mı? Çocuğunuzun aşılarını düzenli yaptırıp yaptırıp yaptırıp mı? Erkek ve kız çocuklarının aileleri yukarıda belirtilen anket sorularına sırasıyla; %79,17 ve %66,67 hayır, %79,17 ve %66,67 hayır, %87,50 ve %100 evet, %83,33 ve %50 hayır, %58,33 ve %50 hayır, %95,83 ve %100 hayır, %95,83 ve %100 hayır, %58,33 ve %66,67 hayır,

%79,17 ve % 33,33 evet, %75,00 ve %33,33 hayır, %91,67 ve kız %83,33 hayır, %91,67 ve %83,33 hayır, %100 ve %100 hayır, %100 ve %83,33 hayır, %87,50 ve %83,33 hayır, %95,83 ve %66,67 evet cevaplarını vermişlerdir.

Sonuç: Bu çalışmada genel olarak kızların %'leri erkeklere göre daha düşük oranda bulunmuştur.

Anahtar Kelimeler: Otizmli çocuklar, hastalık, aileler

Investigation of Frequency of Acute and Chronic Diseases in Children with Autism
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Summary

Objective: Autism spectrum disorder is a complex neuro-developmental disorder that is congenital or occurring in the first years of life. In this study, it was aimed to determine the disease status of individuals with autism who were studying in Sakarya Autistic Children's Education Center.

Materials and Methods: In the light of literature, a questionnaire form consisting of 17 questions was prepared. This questionnaire was applied to parents of children with autism. A total of 30 autism parents, 24 boys and 6 girls, were included in the study.

Results: The mean age of the children with autism was 11.08 ± 2.91 in males and 9.50 ± 2.07 in females. The height of the children with autism was 144.45 ± 19.08 in males and 132.67 ± 14.17 in females. Body weights were found to be 49.79 ± 30.23 in males and 35.83 ± 14.67 in females. The families were asked whether they had a congenital disease and 91.67% of the boys' families and the families of the girls gave 83.33% no. The following questions were asked: Does your child become very ill? Does it take a long time when your child gets sick? Do you take medication when your child gets sick? Are you having difficulty giving medication if your child is taking medication when he / she is ill? Do you think that the drugs you give your child have different side effects? Has your child had measles? Has your child had mumps? Has your child had chickenpox? Has your child had pneumonia? Has your child had a urinary tract infection?

Does your child have asthma? Does your child experience frequent epilepsy? Does your child have chronic renal failure? Does your child have diabetes? Does your child have obesity? Have your children taken their vaccinations regularly? The families of boys and girls are asked the above-mentioned survey questions respectively; 79.17% and 66.67 % no, 79.17% and 66.67 % no, 87.50 % and 100 % yes, 83.33 % and 50% no, 58.33 % and 50% no, 95.83 % and 100% no, 95.83 % and 100% no, 100% 58.33 and 66.67% no, 79.17% and 33.33% yes, 75.00% and 33.33% no, 91.67% and 83.33% no, 91.67% and 83.33% no, 100% and 100% no, % and 83.33% no, 87.50 % and 83.33% no, 95.83% and 66.67% of the answers were yes.

Conclusion: In this study, % of the general girls were found to be less than the males.

Key Words: Children with autism, disease, families.

POSTER BİLDİRİ/POSTER PRESENTATION 14.

Incidentally Finding Parachute Mitral Valve: Case Report

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Introduction

Parachute mitral valve (PMV) is defined as a unifocal attachment of the mitral valve chordae to a single or dominant papillary muscle. Parachute mitral valve is mostly accompanied by other obstructive lesions on the left side of heart (supravalvular mitral ring, subaortic stenosis, and coarctation of aorta) and is known as Shone's complex. Shone complex has poor prognosis because of the presence of multiple hemodynamically significant lesions requiring several complex surgical interventions with a high mortality. Although isolated parachute mitral valve is rarely seen, it has good clinical outcome, like our patient.

Case Report

32-year-old man presented with outpatient clinic without any symptoms for military school admission. He had normal electrocardiography and chest radiography. LV long-axis view elongated chordae converge into a single papillary muscle. Transthoracic echocardiography in the short-axis view at mid-papillary level revealed single papillary muscle and at basal level showed parachute leaflets. Cardiac chambers were in normal size. In four-chamber view reveal pear-shaped mitral configuration with a diastolic dome shape. Echocardiography showed no mitral valve regurgitation and mitral stenosis.

Discussion

Adult PMV is a rare disease compared to the literature. Asymptomatic patients may be discovered incidentally. Mitral stenosis is the usual abnormality in symptomatic patients, with atrial fibrillation or dyspnea being the presenting symptoms. Sudden death can occur. These findings are in contrast to the pediatricage group. An international registry of adults with PMV from the American and European societies of echocardiography will go a long way to improve diagnosis and give insights into the natural history of this uncommon condition.

Conclusions

There no evidence for any pathology other valvular and vascular stenosis. As the presence of parachute mitral valve had no impact on the patient's management, medical follow-up was scheduled. The patient was not admitted to military school due to congenital heart disease.

Key Words: congenital heart disease, mitral valve, incidentally

POSTER BİLDİRİ/POSTER PRESENTATION 15.

Cep Telefonu Kullanımı ile Sağlık Sorunları Arasındaki İlişki

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Giriş ve amaç: Son yıllarda yapılan in vitro ve in vivo çalışmalarda, elektromanyetik alanların (EMA) hücrelerdeki moleküler mekanizmaları incelenmiştir. Bu çalışmalarda biyomoleküllerin sentezi, membran geçirgenliği değişimi, hücre bölünmesi, apoptoz ve kanser oluşumu mekanizmalarında EMA'ların etkileri değerlendirilmiştir. Günümüzde oldukça yaygın olarak kullanılan cep telefonları insanların EMA'lara maruziyeti daha da artmaktadır. Bu durumda, cep telefonlarına bağlı olarak bireylerin sağlık sorunları üzerine etkileri toplumda kaygı ve merak uyandırmaktadır. Çalışmamızın amacı, cep telefonlarının sağlık sorunları üzerine etkilerinin araştırıldığı makaleleri değerlendirmektir.

Yöntemler: Çalışmamızda, PubMed ve Google Scholar'ı içeren veritabanlarından cep telefonu kullanımının sağlık problemleri üzerine etkilerinin incelendiği araştırmalar değerlendirildi.

Bulgular: Çalışmalarda cep telefonlarının kullanımının cilt problemleri riski ile ilişkili olduğu gözlenmiştir. Başka bir çalışmada konuşma bozukluğu olan çocuklarda annelerinin hamilelik öncesi ve sonrası dönemlerindeki cep telefonlarından kaynaklanan EMA'lara maruziyet ilişkileri incelendiğinde cep telefonu kullanım süreleri ile çocuklarda konuşma bozuklukları arasında anlamlı bir ilişkinin varlığı tespit edilmiştir. Diğer çalışmalarda, aşırı cep telefonu kullanımı ile davranış bozuklukları arasında bir ilişkinin olduğu, cep telefonu kullanıcıları arasında baş ağrısı, baş dönmesi, uyku bozukluğu, konsantrasyon bozukluğu, tat

ve koku duyusu kaybı, göz rahatsızlığı, kas ağrısı, göğüs ağrısı ve kalp atış hızının değiştiği görülmüştür.

Sonuç: Çeşitli çalışmalarda, cep telefonlarının kullanım ve konuşma sürelerine bağlı olarak bazı sağlık sorunlarına neden olduğu gözlenmiştir. Ancak cep telefonu kullanımına bağlı sağlık sorunlarının mekanizmaları daha ileri çalışmalarla açıklanmasına ihtiyaç duyulmaktadır.

Anahtar kelimeler: Cep telefonu kullanımı, sağlık problemleri, elektromanyetik alan

The Relationship Between Cell Phone Use and Health Problems

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Introduction and Aim: The effects of electromagnetic fields (EMFs) on molecular mechanisms in cellular processes have been investigated in vitro and in vivo studies in recent years. In these studies, the effects of EMFs on biomolecules synthesis, membrane permeability change, cell division, apoptosis and cancer formation mechanisms have evaluated. Today, mobile phones that are widely used are increasing the exposure of people to EMFs. In this case, depending on mobile phones, the effects of individuals on health problems raise anxiety and curiosity in society. The aim of our study was to evaluate the articles on the effects of mobile phones on health problems.

Methods: In our study, studies investigating the effects of mobile phone use on health problems were evaluated from databases such as PubMed and Google Scholar.

Results: Studies have shown that the use of mobile phones is associated with the risk of skin problems. In another study, the relationship between the duration of mobile phone use and

speech disorders in children was found to be significant in the children with speech disorders. In other studies, it was found that there was a relationship between excessive cell phone use and behavioral disorders, headache, dizziness, loss of smell and taste, impair concentration, sleep disorder, eye discomfort, muscle pain and chest pain and heart rate changed among mobile phone users.

Conclusion: In various studies, it has been observed that it causes some health problems due to the use of mobile phones and the duration of speaking on mobile phones. However, the mechanisms of health problems related to mobile phone use need to be explained with further studies.

Key words: Cell phone usage, health problems, electromagnetic field

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POSTER BİLDİRİ/POSTER PRESENTATION 16.

Nanotechnology in Dentistry

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Abstract

Nanotechnology is a branch of technology that deals with dimensions and tolerances of less than 100 nanometres, especially the manipulation of individual atoms and molecules. nanotechnology have a great potential and has been evolving over the years. With nanotechnology, nanostructures, nanobots, new and better methods, treatment options, pain killers, prescription drugs become possible Nanotechnology helped so many scientific field to research and develop including Dentistry. Dentistry is a evolving field but with help of nanotechnology evolving increased considerably Nanotechnology aided in processing a variety Dental Medecine Nanosystems (DMN) with innovative applications. Nanosystems means the assembly of nanoscale components for the purpose of performing a function. In the literature, nanosystems are described as manufactured nanostructured particles (nanoparticles) and nanostructured materials (nanomaterials) or their combination. The nanomaterials may have intrinsic properties related to their structures and their components or develop new properties related to the simple structuring caused by the incorporation of the nanoparticles. This paper includes examples for recent development of nanoproducts and provides a glimpse of nanotechnological applications in dentistry. New potential treatment opportunities in dentistry can be summarized as mechanical dentifrobots used for chair-side oral health maintenance, covalently bonded diamondised enamel, orthodontic realignments via single office visit and hypersensitivity cure.

Key words: Dentistry, nanotechnology, nanomaterials

Diş Hekimliğinde Nanoteknoloji

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Özet

Nanoteknoloji, 100 nanometrenin altındaki boyutlar ve toleranslarla, özellikle de tek tek atomların ve moleküllerin manipülasyonu ile ilgilenen bir teknoloji dalıdır. Nanoteknolojinin büyük bir potansiyeli vardır ve yıllar içinde göz ardı edilemeyecek kadar ilerledi. Nanoteknoloji ile nanoyapılar, nanobotlar, yeni ve daha iyi yöntemler, tedavi seçenekleri, ağrı kesiciler, reçeteli ilaçlar mümkün hale geldi. Nanoteknoloji, Diş Hekimliği dahil birçok bilimsel alanın araştırılmasına ve geliştirilmesine yardımcı oldu. Diş Hekimliği gelişen bir alandır ancak bu gelişme nanoteknoloji yardımıyla önemli ölçüde artmıştır. Nanoteknoloji işlemlere yardımcı Yenilikçi uygulamaları ile çeşitli Dental Medecine Nanosystems (DMN) geliştirilmesinde kullanılmıştır. Nano sistemler, bir işlevi gerçekleştirmek amacıyla nano ölçekli bileşenlerin birleştirilmesi anlamına gelir. Literatürde nanosistemler, üretilmiş nanoyapılı parçacıklar (nanoparçacıklar) ve nanoyapılı materyaller (nanomalzemeler) veya bunların kombinasyonları olarak tanımlanmaktadır. Nanomalzemeler, yapıları ve bileşenleri ile ilgili özgün özelliklere sahip olabilir veya birleştirmelerin neden olduğu basit yapılanma ile ilgili yeni özellikler geliştirebilir nanoparçacıkların Son nanoproducts gelişimi için örnekler içerir ve diş hekimliğinde nanoteknolojik uygulamaların bir bakış sağlar. Diş hekimliğinde yeni potansiyel tedavi olanakları, sandalye tarafı ağız sağlığı bakımı için kullanılan mekanik diş macunları, kovalent olarak bağlanmış elmaslaştırılmış emaye, tekli ofis ziyareti ve ortodontik düzenlemeler ve aşırı duyarlılık tedavisi şeklinde özetlenebilir.

Anahtar kelimeler: Diş hekimliği, nanoteknoloji, nanomalzeme

POSTER BİLDİRİ/POSTER PRESENTATION 17.

A CASE OF GASTRIC CANCER PREZENTED WITH PEMPHIGUS VULGARIS

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ABSTRACT: Gastric cancer is a common multifactorial and complex malignant disease. One of the most important factor in etiology of Gastric Cancer is an infectious agent (*Helicobacter pylori*- *H. pylori*). In general, personal habits and nutrition, environmental factors, genetic predisposition etc. Play role in pathogenesis. Gastric cancer-related symptoms are often seen in advanced stage tumors. Therefore, early diagnosis of the tumor is usually not possible. The most common symptoms are weight loss and loss of appetite.

Pemphigus is a bullous, uncommon auto immune disease of the skin and mucous membranes. The auto antibodies against the proteins on the surface of keratinocytes have an important role in the pathogenesis of the disease. Paraneoplastic pemphigus is a dermatose most frequently associated with lymphoproliferative malignancies such as Non-Hodkinglymphoma, chronic lymphocytic leukemia, and Castelman's disease and has 90% mortality rate when associated with lymphoma. Unlike the classical, paraneoplastic Pemphigus has polymorph (bullos, targetoid, lichenoid etc.) lesions and severe mucosal involvement, accompanied by resistant stomatitis. Immune system is thought to be the most important factor underlying pathogenesis due to malignancy. Symptoms can occur in advance, at the same time or after a cancer diagnosis. To our knowledge, only two case reports of bullous pemphigoid following Gastric cancer have been reported.

Our case is presented in the light of the literature because of the poor prognosis of this dermatological paraneoplastic syndrome and its good response to sistemic chemotherapy treatment. Possible underlying systemic diseases and malignncies should be kept in mind in dermatological pathologies.

Key words: Stomach Ca, Pemphigus, Paraneoplastic syndrome, Chemotherapy

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POSTER BİLDİRİ/POSTER PRESENTATION 18.

Recurrent Transient İschaemic Attack Due to Pedunculated Mobile Aortic Arch Thrombus: A Case Report

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Introduction

Although mobile aortic arch thrombus is a very rare condition (there are about 30 case reports in PubMed), it may give rise to serious complications, such as peripheral, visceral and cerebral emboli. Here, we report a case of a pedunculated mobile aortic arch thrombus that caused transient ischaemic attack.

Case Report

An 84-year-old woman was admitted to the emergency room because of sudden episodes of left-sided hemiparesis and hemi-hypoesthesia lasting less than 5 min. During the last 1 year, she experienced two episodes of right-sided weakness lasting 3–5 min. Suprasternal notch echocardiography (transthoracic echocardiography) revealed a highly mobile 1.4×0.7-cm pedunculated echogenic mass attached to the superior surface of the aortic arch. The patient refused surgery as well as endovascular treatment. Therefore, we decided to start anticoagulation therapy.

Discussion

Thoracic aortic mobile thrombi have been observed more frequently with both an aging population and the frequent use of advanced imaging techniques, such as transoesophageal echocardiography (TEE), CT and MRI, in the last 20 years. Among these, thrombolytic therapy has been used rather restrictively, because thrombolytic agents leads to selectively lysing the stalk of the lesion. And this massive thrombus burden associated with probably serious embolic events. In general, anticoagulation therapy is started with heparin for 2 weeks. Surgical intervention is preferred to anticoagulation therapy in young patients, in patients with a large hypermobile thrombus and in patients with recurrent embolic event.

Conclusion

In patients with transient ischaemic attack, a thoracic aortic mobile thrombus should be considered as a potential cause of the condition. Transthoracic echocardiography is an important non-invasive imaging approach to identify and evaluate an aortic arch thrombus in the suprasternal notch view. Treatment can be individualised according to comorbid conditions, patient age, thrombus mobility, thrombus location, thrombus size, emboli recurrence and patient preference.

Key Words: thrombus, arcus aorta, transient ischaemic attack

POSTER BİLDİRİ/POSTER PRESENTATION 19.

Use of mobile phones/computer and health problems: in University Students

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Introduction and Aim: In our daily life, mobile phones and desktops and laptops are widely used. They are also an electromagnetic field source. As their use becomes widespread, people are beginning to be exposed to more electromagnetic fields (EMF). The EMF exposure duration and the distance of the EMF source are important factors for EMA's effects on human health. In this survey, our aim was to investigate the effects of mobile phone/computer usage on health problems.

Methods: 552 vocational school students of health services are included in this study. The questionnaire about characteristics of health problems related to mobile phone/computer usage and mobile phone/computer usage duration were applied to the students.

Results: 32.4% of our students were male, 65.8% were female and their median age was 21 (18-41). There were relations between use of mobile phone duration and headache frequency, eye discomfort and forgetfulness. Also, we found that there were relations between duration of talking on the phone per day and eye discomfort and headache frequency and sleep disorder and muscle pain and loss of taste sensation and dizziness. Additionally, there were relations between use of computer and fatigue and loss of taste sensation and skin discomfort.

Conclusion: In this study, we observed that the use of computers with mobile phones caused some health problems in vocational school students of health services. According to our results exposure to electromagnetic radiation due to technological systems used in our daily life has increased considerably. All these data need to be supported by more detailed scale surveys and

larger population studies.

Acknowledgements (if any): We would like to thank the 2016-2017 Education Year İstanbul Gelişim University Vocational School students of Health Services who participated in our survey. The protocol was approved by the Ethics Committee of İstanbul Gelişim University and was conducted in accordance with the Declaration of Helsinki (77366270-199- E.4821).

Key words: Mobile phone usage, computer usage, university students, health problem

Cep telefonu/bilgisayar kullanımı ve sağlık sorunları: Üniversite Öğrencilerinde

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Giriş ve amaç: Günlük hayatımızda, cep telefonları, masaüstü ve dizüstü bilgisayarlar yaygın olarak kullanılmaktadır. Bunlar aynı zamanda elektromagnetik alan kaynağıdır. Kullanımları yaygınlaştıkça, insanlar daha fazla elektromanyetik alana (EMA) maruz kalırlar. EMA'lara maruz kalma süresi ve EMA kaynağının mesafesi EMA'nın insan sağlığı üzerindeki etkileri için önemli faktörlerdir. Bu anket çalışmamızda, amacımız cep telefonu / bilgisayar kullanımının sağlık sorunları üzerindeki etkilerini araştırmaktır.

Yöntemler: Çalışmaya 552 Meslek Yüksekokulu Sağlık Hizmetleri öğrencisi dahil edildi. Öğrencilere cep telefonu/bilgisayar kullanım özellikleri ve cep telefonu/bilgisayar kullanım süreleri ile ilgili sağlık problemlerini içeren anket uygulandı.

Bulgular: Öğrencilerimizin% 32.4'ü erkek,% 65.8'i kadın, ortalama yaşı 21 (18-41) idi. Cep telefonu kullanım süresi ile baş ağrısı sıklığı, göz rahatsızlığı ve unutkanlık arasında ilişki vardı. Cep telefonunda konuşma süresi ile göz rahatsızlığı ve baş ağrısı sıklığı ve uyku bozukluğu ile kas ağrısı ve tat duyusu kaybı ve baş dönmesi kaybı arasında ilişki olduğunu

bulduk. Bilgisayar kullanımı ile yorgunluk, tat alma duyusu kaybı ve cilt rahatsızlığı arasında ilişki olduğu saptandı.

Sonuç: Bu çalışmada, cep telefonu ve bilgisayar kullanımının Sağlık Hizmetleri Meslek Yüksekokulu öğrencilerinde bazı sağlık sorunlarına neden olduğunu görüldü. Elde ettiğimiz verilere göre, günlük hayatımızda kullanılan teknolojik sistemler nedeniyle elektromanyetik radyasyona maruz kalma önemli ölçüde artmıştır. Tüm bu verilerin daha detaylı ölçeklendirilmiş anket çalışmaları ile daha geniş popülasyon çalışmaları ile desteklenmesine ihtiyaç duyulmaktadır.

Teşekkür (varsa): Araştırmamıza katılan 2016-2017 Eğitim Yılı İstanbul Gelişim Üniversitesi Sağlık Hizmetleri Meslek Yüksekokulu Öğrencilerine teşekkür ederiz. Çalışma, İstanbul Gelişim Üniversitesi Etik Kurulu tarafından onaylandı (77366270-199-E.4821) ve Helsinki Bildirgesi'ne uygun olarak yürütüldü.

Anahtar kelimeler: Cep telefonu kullanımı, bilgisayar kullanımı, üniversite öğrencileri, sağlık sorunu

POSTER BİLDİRİ/POSTER PRESENTATION 20.

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A Comparative Study of Clinicopathological and Demographic Features of Cancer Patients

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Introduction and Aim: The aim of this study was to assess the patient profiles of cancer patients who received a diagnosis between September 2018- January 2019 in Sakarya University Faculty of Medicine Department of Medical Oncology.

Methods: Pathology, hemogram, CT and PET-CT results of 230 patients (%49.1 male and %50.9 female) who were diagnosed and treated in the Department of Medical Oncology were examined and then statistically analyzed by Statistical Package for Social Sciences (SPSS 20.0) program. Frequency distribution, percentage and chi-square test were used to statistically analyze the obtained data.

Results: The average age of the patients was 58.58. More than half of the patients were diagnosed with breast (n=65), lung (n=57) and GI cancers (colon, pancreas and gastric) (n=49). According to the tumor stage, 12.9%, 54.8% and 29.0% of patients were stage I, II and III, respectively. When the number of patients distributed by TNM clinical stage were examined, T1, T2 T3 and T4 stages were determined in 38.2%, 27.3%, 20.0% and 14.5% of patients, respectively. Additionally, white blood cell (WBC) count was measured in 73% (<10.000 /mL) and 21.3% (>10.000 /mL) of patients. As a result of the chi-square analysis, there was a significant difference between WBC values and breast, lung and GIS cancer patients (p <0.01). As an indicator of liver function including Aspartate and Alanine



aminotransferase (AST and ALT) values, it was found that ALT values were higher (> 18 IU / mL) in 40.9% of patients, while AST values were higher (>19 IU/mL) in %48.3 of patients. In addition, elevated serum levels of CA15-3 and CEA were identified in 8.5% (> 31.0 U / mL) and 22.3% (> 5.0 ng / mL) of the patients, respectively.

Conclusions: In conclusion, cancer patients admitted to Medical Oncology Department were particularly diagnosed with breast, lung and GI cancer at more advanced stages.

Keywords: Cancer, Cancer types, TNM staging, Profile.

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POSTER BİLDİRİ/POSTER PRESENTATION 21.

Microdissection Testicular Sperm Extraction (TESE)

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AİM

Micro TESE is a surgical procedure in male infertility cases. Ejaculate does not have any sperm (azoospermia) from the testis tissue of people to obtain sperm and allow them to have a baby by tube baby method. Micro-TESE can be applied to people with rare sperm quality, and healthy sperm can be obtained in this way. It is a promising practice for people who continue to become sterile in our society today.¹ Our purpose in preparing this presentation; We wanted to emphasize the importance of TESE application in the treatment of infertility.

Metod:

In micro TESE operation, the testis is completely opened with a single incision and the tissue is grown by microscope and the areas where sperm production is possible are detected and the necessary tissues are collected by the urologist. The pieces of tissue taken into the preparation are examined by light microscopy with a magnification factor of about 1200. When sperm cells are seen, the patient is stored at -196 ° C in laboratory conditions under appropriate conditions to be used in the treatment of the couple¹. During the treatment, frozen sperm cells are thawed and ready for injection into oocytes.

Result:

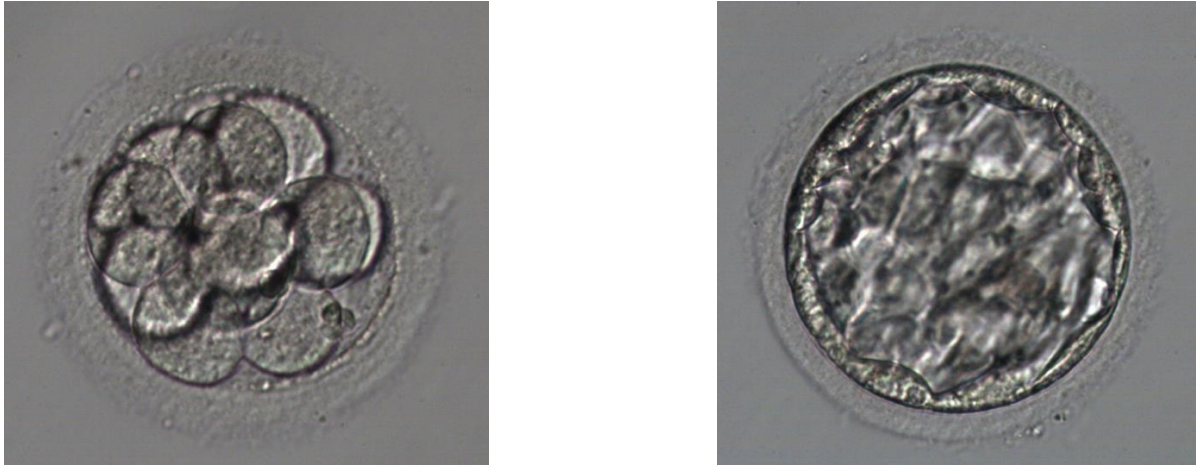


Figure 1. At the center of Sakarya University assisted reproduction techniques, we see embryos obtained by using tese perms. The third day on the left is the embryos, the blood hcg value is 123 IU / ml. The hcg value in the blood of the fifth day embryo on the right is 226 IU/ ml. We received the heartbeats of the cases in which two embryos were transferred and the pregnancy is continuing.

Conclusion

TESE provides a very good result in the treatment of infertility especially in azoospermia cases with experienced team application. We believe that the success of the treatment will rise with the dedication of the practitioner team.

Keywords: Tese, Azospermi, hcg, İnfertility

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POSTER BİLDİRİ/POSTER PRESENTATION 22.

Relationship of Diabetes Mellitus Lipo (a) and Paraoxonase

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Aim

The aim of this study was to investigate the relationship between paraoxonase1 (PON1) and lipoprotein (a) (Lipo (a) levels in patients with diabetes mellitus (DM).

Materials and Methods

Materials and methods used in this study are the articles obtained by scanning pubmed and similar scientific sites.

Results

Lipoproteins are generally hydrophobic in their centers cholesterol esters and triglycerides (TG). Increased serum Lipo (a) concentrations have also been found in patients with chronic renal failure, carcinoma of the lung, stroke, DM, Diabetic nephropathy, immediately after myocardial infarction.¹ DM gives systemic clinical signs; these findings are located in a wide range of flaws, including vision defects, neurological manifestations, and even lipid profiling disorders.

Paraoxonase-1 (PON1) is a protein of 354 amino acids with a molecular mass of 43 kDa.⁶ In serum, it is almost exclusively located on HDL. PON1 is a calcium-dependent esterase nearly associated with the highdensity lipoprotein (HDL) in human serum. Several studies have shown that PON1 activity is reduced in DM.² Low PON1 activity increases oxidative damage in DM shows. Although the mechanism of reduction of PON1 in diabetics is not known, it is thought to be associated with increased glucose concentration. Glucose increase inactivate both PON enhances lipid peroxidation on HDL. PON1 activity has also been shown to decrease in healthy individuals with high glucose levels.

Conclusion

The increase in Lipo (a) levels and the decrease in PON1 levels in DM patients are important for the regulation of DM and prevention of their complications. This shows that increased Lipo (a) levels are a factor in the formation of DM. This indicates that further studies and experiments are needed to explain the negative and negative effects of Lipo (a) and PON1 levels on DM.

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Keywords: DM, Lp (a), PON1

POSTER BİLDİRİ/POSTER PRESENTATION 23.

THE PLACE OF BEE VENOM IN NEUROLOGICAL DISEASES

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AIM

The history of Apiterapi, the use of bee venom for medical purposes, dates back to the period of Hippocrates and Galen. Nowadays, in more than 1,500 studies in the world literature, bee venom has been observed in the clinical autoimmune disorders; Psoriasis, Systemic Lupus Erythematosus (SLE), Epilepsy, Migraine, Hypertension and Arthritis, Multiple Sclerosis (MS), Chronic pains, Alzheimer's disease against many of the strong therapeutic activity is mentioned. Multiple Sclerosis (MS) is a chronic disease affecting the Central Nervous System (CNS). It causes inflammation and destruction of myelin. The cause of MS is unknown and there is no treatment. The aim of this study is to show the place of bee venom in the treatment of MS from neurological diseases. The aim of this study is to show the place of bee venom in the treatment of MS, which is a neurological disease.

MATERIAL AND METHOD

The therapeutic activity of bee venom can be attributed to the main components of the structure, such as melittin, mast cell degraninating peptide, histamine derivatives and adollapine. Bee venom treatment can be applied directly to the disease as a live injection, acupuncture, ointment or direct regional bee bite. Bee venom is analyzed by thin layer chromatography, high performance liquid chromatography, gas chromatography, mass spectrometry, capillary electrophoresis and visible ultraviolet spectrophotometry. We will apply Apamin and melittin, one of the most effective peptides of the bee venom, which is used in the treatment of the product which we purified by chromatographic method.

RESULTS

Multiple sclerosis can attack all regions of the central nervous system, and there are numerous findings and symptoms. Approximately 85% of patients with multiple sclerosis are initially relapsed and recovered. Improvements and symptoms can be seen in the patients at certain intervals after attacks or relapses. Clinical studies and animal experiments were performed on

the use of Amyotrophic Lateral Sclerosis. In a new study that compiled these, it was thought that neuroprotective effects of bee venom may be effective in neurodegenerative diseases but it was concluded that it is a neuropsychological approach.

CONCLUSION

In 1994, the plants were organized under the authority of "Diet Foods Health and Education" in the United Nations. With the implementation of the Regulation on " Traditional and Complementary Medicine Practices" published in the Official Gazette dated 27 October 2014 and numbered 29158, cheaper and effective treatment methods will be applied to diseases in our country. In the light of the available data, bee venom and its components can be produced in our country and offered as a complement to prophylaxis or modern medicine.

Keywords : Bee venom, Apitheraphy, Neurological Diseases

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POSTER BİLDİRİ/POSTER PRESENTATION 24.

The effect of smoking on paraoxonase 1 activity and high density lipoprotein

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Aim

Our aim was to determine the levels of high-density lipoprotein (HDL) and the associated Paraoxonase-1 (PON1) in smokers, and to investigate the effects of atherosclerosis and coronary heart disease (CHD).

Materials and Methods

Materials and methods used in this study are the articles obtained by scanning pubmed and similar scientific sites.

Results

PON1 and HDL increase the risk of atherosclerosis if plasma levels decrease.. PON1 in serum is associated with HDL and has been shown to inhibit low-density lipoprotein (LDL) oxidation.¹ It has long been established that smoking is an independent risk factor for atherosclerosis and CHD. Smoking also disrupts lipid and lipoprotein metabolism. HDL, triglycerides and LDL and low HDL and PON1 levels were seen in smokers compared with non-smokers.

Smoking is associated with increased free radical production and depletion of antioxidants, which is one of the strongest stimulants of the oxidative process observed in humans. HDL-C is commonly known as "good cholesterol, because high HDL-C levels are associated with low levels of CHD, and low HDL-C levels are associated with increased CHD. PON-1, It plays an important role in the anti-inflammatory properties of HDL, acts as an antioxidant and prevents the oxidation of atherogenic lipoproteins such as LDL.² Studies have shown that male and female smokers have significantly lower levels of HDL-c than non-smokers.

Conclusion

The negative effects of smoking on the risk of cardiovascular disease are mediated by the effects on lipid and lipoprotein metabolism.. Smoking causes a decrease in serum HDL and PON1 levels. In particular, by reducing HDL concentration and modification, it causes HDL to lose its protective properties and thus to increase atherogenic conditions. This suggests a possible link between inhaled tobacco smoke and atherosclerotic process. This suggests that further studies and experiments are needed to explain the negative effects of smoking on HDL and PON1.

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Keywords: PON1, HDL, CVD, Cigarette Smoking