TÜRKİYE ENDOKRİNOLOJİ VE METABOLİZMA DERNEĞİ BÜLTENİ



Üç ayda bir yayımlanır • Üyelere ücretsiz olarak gönderilir

Sayı 60 • Ekim – Kasım – Aralık - 2017



ndoBridge 2017, 19-22 Ekim 2017 tarihleri arasında Regnum Carya Hotel, Antalya'da başarılı bir şekilde tamamlandı. Endokrinoloji alanında dünyada birçok ilke imza atan kongremize bu yıl en yüksek ülke ve hekim sayısına ulaşarak 39 ülkeden 473 hekim katıldı. EndoBridge® 2017 bilimsel programında 24 konferans ve 16 vaka tartışması oturumu ile birlikte 80'in üzerinde sözlü ve poster vaka sunumunun yer verildi. Kongrede diyabet, obezite, lipid bozuklukları, tiroid, kemik ve osteoporoz, hipofiz, adrenal, nöroendokrin tümörler, kadın ve erkek üreme endokrinolojisi dahil olmak üzere endokrinolojinin tüm problemleri kapsamlı bir şekilde ele alındı.



6. Adrenal Gonad Sempozyumu Başarıyla Gerçekleşti



Adrenal-Gonad Sempozyumu, derneğimiz himayesinde, Başkent Üniversitesi Tıp Fakültesi ev sahipliğinde, Adana Dr. Turgut Noyan Uygulama ve Araştırma Merkezi-Kışla Yerleşkesi'nde 16. Aralık.2017 Cumartesi günü gerçekleştirilmiştir. Sempozyuma büyük çoğunluğu endokrinoloji ve metabolizma hastalıkları uzmanı olmak üzere 66 kişi katılmıştır. Sunumların tamamı kayda alınmış, bazı sunumlar derneğimiz facebook adresinden canlı olarak yayınlanmıştır. Sosyal medya yolu ile toplantımız binlerce kişi tarafından görüntülenmiştir. Adana'ya oldukça uzak illerden kendi imkanları ile gelmiş genç endokrinologların varlığı, bilimsel içeriği yüksek konuşmalar ve tartışma ortamı, son oturuma kadar gün boyu azalmadan devam eden katılımcı sayısı ile verimli ve hedefine ulaşmış bir toplantı olmuştur.



ipertansiyon ve Lipid Metabolizması Bozuklukları Eğitim Sempozyumu, 27-29 Ekim 2017 tarihlerinde Kapadokya'da yaklaşık 130 meslektaşımızın katılımı ile başarılı bir şekilde tamamlanmıştır.



Türkiye çapında değişik bölgelerimizde yapılan TİROKURS'un yirmincisi 7 Ekim 2017'de İzmir Wyndham Özdilek Otel'de endokrinoloji araştırma görevlileri, aile hekimleri ve iç hastalıkları uzmanlarından oluşan 80 hekimin katılımı ile başarı bir şekilde tamamlanmıştır.



TEMD KILAVUZ IŞIĞINDA ADRENAL VE GONAD HASTALIKLARI KURSU TAMAMLANDI

Prof. Dr. Erol Bolu ve Prof. Dr. Kubilay Ukinç koordinatörlüğünde, 19. İç Hastalıkları Kongresinden önce Adrenal Gonad Hastalıkları Çalışma Grubu "TEMD KILAVUZLARI IŞIĞINDA ADRENAL VE GONAD HASTALIKLARI KURSU" 48 katılımcı ile karşılıklı samimi soru cevap akışı içinde başarılı bir şekilde tamamlanmıştır.

13. Hipofiz Sempozyumu Düzenlendi

nkara Üniversitesi Tıp Fakültesi Endokrinoloji ve Metabolizma Hastalıkları Bilim Dalı, 2004 yılında hipofiz hastalıkları hakkında farkındalığı artırmak ve bilimsel paylaşımlarda bulunmak üzere ülkemizdeki ilk Hipofiz Sempozyumunu düzenlemiştir. Takip eden yıllarda Hipofiz Sempozyumları, geleneksel hale gelmiş, her yıl giderek artan katılım ve bilimsel kalitesi yüksek içerikle yapılmaya devam edilmiştir. 13. Hipofiz Sempozyumu 10-11 Kasım 2017 tarihlerinde, yine Ankara Üniversitesi Tıp Fakültesi Endokrinoloji ve Metabolizma Hastalıkları Bilim Dalı tarafından gerçekleştirilmiştir. Sempozyumun bilimsel sekretaryasını, Prof. Dr. Mustafa Şahin ve Doç. Dr. Özgür Demir yapmışlardır. Sempozyum büyük bir ilgi ve dikkatle izlenmiş, konu hakkında deneyim paylaşımları etkin bir biçimde gerçekleştirilmiştir.

10 Kasım 2017 tarihinde yapılan olgu sunumları, Endokrinoloji, Radyoloji ve Beyin Cerrahisi gibi farklı branşla-

rın katılımıyla hastaya bütüncül bakabilme açısından yol gösterici olmuştur. Hipofiz Sempozyumunun farklı branşlardan çok sayıda hekim katılımıyla gerçekleşmiş olması, fakültemizin Endokrinoloji ve Metabolizma Hastalıkları Bilim Dalı'nın hipofiz hastalıkları alanında yıllardır eksikliği duyulan multidisipliner yaklaşımı da başardığının bir göstergesidir.

10 Kasım'da katılımcılara Atatürk rozeti, Atatürk ile ilgili kitap ve açılışta Atatürk hakkında az bilinenlerle ilgili bir konuşma yapılmıştır. 10 ve 11 Kasım'daki sempozyum sürecinde, salonun dolu, fuaye alanın çay ve kahve molaları dışında boş olması dikkat çekmiştir.

Artık geleneksel hale gelen Hipofiz Sempozyumları, ilgili branş hekimleri tarafından her yıl büyük bir istekle beklenen, bilimsel içeriği yüksek, kaliteli akademik faaliyetlerin başında gelmektedir.



Kongre, Kurslar ve Sempozyumlar





Bilimsel Kongreler, Ulusal ve Uluslararası Sempozyumlar

12-14 Ocak 2018

Endokrinolojide Fark Yaratacak Akademisyenler Movenpick Hotel, Golden Horn, İstanbul www.temd.org.tr

20 Ocak 2018

Endokrin Aciller Kursu Akra Barut Hotel, Antalya www.temd.org.tr

17-18 Şubat 2018

A'dan Z'ye Diyabet Klinik Araştırmalar Eğitimi İzmir www.temd.org.tr

23-24 Şubat 2018

7. Adrenal Gonad Sempozyumu İstanbul Bilim Üniversitesi, İstanbul Florence Nightingale Hastanesi İstanbul www.temd.org.tr

24 Şubat 2018

11. Endokrin Aciller Kursu Zorlu Grand Hotel, Trabzon www.temd.org.tr

17-20 Mart 2018

ENDO 2018 Chicago, Illinois, USA http://www.endoconference2018.com/

24 Mart 2018

Kalıtsal Metabolizma Hastalıkları Kursu Hilton Hotel, Ankara www.temd.org.tr

31 Mart 2018

Tiroidoloji Kursu TİROKURS - 21 Holiday Inn Otel, Gaziantep www.temd.org.tr

31 Mart - 01 Nisan 2018

16. Hipertansiyon Eğitim Kursu Hilton Garden Inn Hotel, Çorlu www.temd.org.tr

14-15 Nisan 2018

8. Mezuniyet Sonrası Lipid Metabolizması ve Bozuklukları Eğitim Sempozyumu Pamukkale Üniversitesi, Kongre ve Kültür Merkezi Denizli www.temd.org.tr

19-22 Nisan 2018

World Congress on Osteoporosis, Osteoarthritis and Musculoskeletal Diseases Krakow, Poland http://www.wco-iof-esceo.org/

09-13 Mayıs 2018

40. Türkiye Endokrinoloji ve Metabolizma Hastalıkları Kongresi Sueno Hotel, Antalya http://temhk2018.org/

19-22 Mayıs 2018

20th European Congress of Endocrinology İspanya https://www.ese-hormones.org/events-deadlines/europeancongress-of-endocrinology/ece-2018/

15-18 Temmuz 2018

9th International Congress of Neuroendocrinology Toronto, Canada http://www.icn2018.org/

15-18 Eylül 2018

41st Annual Meeting of the ETA Newcastle, England http://www.eta2018.org

01-05 Ekim 2018

54th EASD Annual Meeting Berlin, Germany www.easd.org

25-28 Ekim 2018

EndoBridge 2018 Regnum Carya Hotel, Antalya www.endobridge.org

1-4 Aralık 2018

18th International Congress of Endocrinology and 53rd SEMDSA Congress Cape Town, South Africa http://www.ice2018.org

14-15 Aralık 2018

8. Türkiye Tiroid Hastalıkları Kongresi Ankara www.temd.org.tr

Üyelerimizden Literatür Seçmeleri

NONFUNCTIONING ADRENAL INCIDENTALOMA AFFECTING CENTRAL BLOOD PRESSURE AND ARTERIAL STIFFNESS PARAMETERS.

Akkan T¹, Altay M², Ünsal Y¹, Dağdeviren M³, Beyan E¹.

Endocrine. 2017 Dec;58(3):513-520. doi: 10.1007/s12020-017-1439-6. Epub 2017 Oct 17.

PURPOSE: Recently, cardiovascular risk is thought to be increased in patients with nonfunctioning adrenal incidentaloma (NFAI). There are no sufficient studies in the literature to evaluate this situation in NFAI patients without cardiovascular risk. The objective of this study is to compare peripheral and central blood pressure and arterial stiffness between patients with NFAI and healthy volunteers (of a similar age, gender and body mass index as the NFAI group) who have no traditional cardiovascular risk factors and autonomous cortisol secretion, with pulse wave analysis (PWA).

METHODS: In this cross-sectional study, we evaluated 35 NFAI patients who have no traditional cardiovascular risk factors and 35 healthy volunteers. PWA was performed in the participants of similar gender, age and body mass index, with a Mobil-O-Graph PWA/ABPM (I.E.M. GmBH, Stolberg, Germany) device. Radiological and biochemical data were obtained retrospectively in the NFAI group.

RESULTS: In our study, systolic blood pressure (SBP), diastolic blood pressure (DBP), mean arterial pressure (MAP), central SBP, central DBP, peripheral vascular resistance, augmentation pressure (AP), heart rate-corrected augmentation index (Aix@75) and pulse wave velocity (PWV) values were significantly higher in the NFAI group compared to the control group. In addition, peripheral and central blood pressure and arterial stiffness parameters were correlated with age and duration of NFAI diagnosis of more than 1 year.

CONCLUSIONS: NFAIs are known as cardiometabolically innocent, but in our study, both peripheral and central blood pressure values and arterial stiffness parameters were negatively affected in patients diagnosed with NFAI who have no traditional cardiovascular risk factors. These patients are at risk of cardiovascular diseases.

VISCERAL ADIPOSITY INDEX LEVELS IN OVERWEIGHT AND/OR OBESE, AND NON-OBESE PATIENTS WITH POLYCYSTIC OVARY SYNDROME AND ITS RELATIONSHIP WITH METABOLIC AND INFLAMMATORY PARAMETERS.

Durmus U¹, Duran C², Ecirli S¹.

J Endocrinol Invest. 2017 May;40(5):487-497. doi: 10.1007/s40618-016-0582-x. Epub 2016 Nov 12.

BACKGROUND: Visceral adiposity index (VAI) is a proposed parameter to evaluate visceral obesity instead of waist circumference (WC) in patients with polycystic ovary syndrome (PCOS). We aimed to evaluate VAI levels in overweight and/or obese, and non-obese PCOS patients and investigate the association between metabolic and inflammatory parameters.

METHODS: Seventy-six PCOS patients between 18 and 40, and 38 age- and BMI-matched controls were enrolled into the study. Both PCOS groups and controls were classified into two subgroups according to body mass index (BMI) <25 and ≥25 kg/m2.

RESULTS: In PCOS patients, waist/hip ratio (WHR) (p = 0.023), diastolic blood pressure (DBP) (p = 0.001), insulin (p = 0.011), homeostasis of model assessment (HOMA-IR) (p = 0.006) and uric acid (UA) (p = 0.002) were higher than controls. In overweight and/or obese PCOS group, DBP (p < 0.001), insulin (p = 0.002), HOMA-IR (p = 0.001), triglyceride (p = 0.015) and VAI (p = 0.031) were higher than overweight and/or obese controls. In non-obese PCOS group, WHR (p = 0.016), WC (p = 0.030), DBP (p = 0.010) and UA (p < 0.001) were higher than non-obese controls. Similar VAI levels were found in all PCOS and non-obese PCOS subgroups than peer controls. Overweight and/or obese PCOS group had higher VAI levels than non-obese PCOS group (p < 0.001). VAI levels were positively correlated with WHR, glucose, HOMA-IR, high-sensitive CRP and UA in PCOS group. In controls, VAI levels were positively correlated with WHR, insulin and HOMA-IR.

CONCLUSION: We found that VAI levels were higher in overweight and/or obese PCOS patients compared to peer controls and non-obese PCOS patients, and associated with some metabolic and inflammatory parameters.

SIGNAL PEPTIDE-CUB-EGF DOMAIN-CONTAINING PROTEIN 1 (SCUBE1) LEVELS IN PATIENTS WITH OVERT AND SUBCLINICAL HYPERTHYROIDISM: EFFECTS OF TREATMENT.

Erem C^1 , Civan N^1 , Coskun H^1 , Mentese A^2 , Suleyman AK^1 , Altay DU^2 , Akgul Z^3 , Deger O^2 .

Clin Endocrinol (Oxf). 2016 Jun;84(6):919-24. doi: 10.1111/cen.12955. Epub 2015 Nov 12.

BACKGROUND AND OBJECTIVES: Signal peptide-CUB-EGF domain-containing protein 1 (SCUBE1) has been shown to increase in parallel with platelet activation in acute ischaemic and thrombotic diseases. There has been no study evaluating SCUBE1 levels in patients with overt hyperthyroidism (OHyper) and subclinical hyperthyroidism (SHyper), conditions which are known to show impairment of both endothelial and platelet function. This study sought to evaluate SCUBE1 concentrations in patients with SHyper and OHyper, and assessed the effects of antithyroid drug (ATD) therapy on circulating SCUBE1 levels.

DESIGN AND METHODS: Forty-five untreated patients with OHyper, 20 untreated patients with SHyper and 30 age- and sex-matched healthy controls were prospectively included in the study. Biochemical and hormonal parameters were evaluated in all patients before and after treatment.

RESULTS: Compared with the control subjects, SCUBE1 levels were significantly increased in patients with SHyper and OHyper (P < 0.0001 and P = 0.002, respectively). SCUBE1 levels were not significantly different in patients with OHyper compared with patients with SHyper. There was no significant correlation between serum thyroid hormones and SCUBE1 levels. Plasma SCUBE1 levels decreased significantly in both OHyper and SHyper after ATD treatment (P < 0.05).

CONCLUSIONS: Increased SCUBE1 levels in both SHyper and OHyper patients may reflect increased platelet activation and possible endothelial dysfunction, which might augment the risk for atherosclerotic and atherothrombotic complications. SCUBE1 may be used as a reliable marker of endothelial damage in hyperthyroidism, especially in the subclinical period.

DETERMINANTS OF OBSTRUCTIVE SLEEP APNEA SYNDROME: PRO-INFLAMMATORY STATE AND DYSFUNCTION OF HIGH-DENSITY LIPOPROTEIN.

 $Karadeniz\,Y^1,\,Onat\,A^2,\,Akbas\,T^3,\,Simsek\,B^4,\,Y\"uksel\,H^5,\,Can\,G^6.$

Nutrition. 2017 Nov - Dec;43-44:54-60. doi: 10.1016/j.nut.2017.06.021. Epub 2017 Jul 6.

OBJECTIVE: The goal of this study was to determine variables preceding and predicting incident obstructive sleep apnea syndrome (OSAS) in the population at large.

METHODS: Anthropometric, lipid, and non-lipid variables in participants with newly developing OSAS (n=131) were compared with those of a cohort sample (n=2615) of the Turkish Adult Risk Factor study. Available values preceding (by a median of 32 mo) the development of OSAS were used in multivariable Cox regression models.

RESULTS: Significant determinants of OSAS assessed by group differences were waist/ neck circumference and fibrinogen. Fasting triacylglycerols, systolic blood pressure, and C-reactive protein in men and low sex hormone-binding globulin and elevated homeostatic model assessment in women were further significant covariates. Cox regression analysis for the risk of incident OSAS confirmed the independent predictive value of central obesity measures, especially neck circumference (having a twofold hazard ratio) and younger age. Age-adjusted former smoking status and-compared with the lowest tertile-the upper two tertiles of fibrinogen (relative risk = 1.66, 95% confidence interval: 1.05-2.63) were significant predictors. Elevated triacylglycerols in males and high apolipoprotein B and lowest high-density lipoprotein cholesterol tertile in females also predicted subsequent OSAS. Systolic blood pressure and total cholesterol did not prove to be independent predictors in multivariable adjusted Cox models in which partial sex-dependent independence of obesity measures of the previously stated five variables was essentially retained.

CONCLUSIONS: An enhanced pro-inflammatory state appeared to be the underlying pathophysiologic mechanism for OSAS, whereas in men, the added factor of high-density lipoprotein dysfunction was suggested. Because it contributes to the pro-inflammatory state, discontinuance of smoking was another further significant predictor of OSAS.

PLASMA TOTAL OXIDANT AND ANTIOXIDANT STATUS AFTER ORAL GLUCOSE TOLERANCE AND MIXED MEAL TESTS IN PATIENTS WITH POLYCYSTIC OVARY SYNDROME.

Kucukaydın Z¹, Duran C², Basaran M¹, Camlica F³, Erdem SS⁴, Basaran A¹, Kutlu O⁵, Burnik FS⁶, Elmas H⁷, Gonen MS⁸.

J Endocrinol Invest. 2016 Oct;39(10):1139-48. doi: 10.1007/s40618-016-0498-5. Epub 2016 Jun 14.

PURPOSE: Insulin resistance (IR) and increased oxidative stress (OS) are the characteristics of polycystic ovary syndrome (PCOS). In this study, we aimed to evaluate the effects of oral glucose tolerance (OGTT) and mixed meal tests (MMT) on plasma total oxidant (TOS) and total antioxidant status (TAS) in patients with PCOS and the relationship between these parameters and IR, calculated via homeostasis of model assessment-IR (HOMA-IR) and Matsuda's insulin sensitivity index (ISI) derived from OGTT and MMT.

METHODS: Twenty-two patients with PCOS, and age- and body mass index (BMI)-matched 20 women as controls were enrolled into the study. Five-hour OGTT and MMT were performed on different days, and before and after these tests, plasma TOS and TAS levels were investigated. IR was calculated with HOMA-IR and Matsuda's ISI.

RESULTS: HOMA-IR levels were higher in patients with PCOS, compared to controls, while Matsuda's ISI derived from OGTT and MMT was higher in controls. Plasma TOS levels before OGTT and MMT were higher in patients with PCOS than controls, while TAS levels were similar. After OGTT, plasma TOS levels became decreased at 5th hour, when compared to baseline values in PCOS group. Likewise, the same decrement was found in controls, but the decrement was not significant. After OGTT and MMT at 5th hour, no changes were observed in TAS levels, compared to baseline.

CONCLUSION: Matsuda's ISIs derived from OGTT and MMT can be used instead of each other, and interestingly, we found a decrease in TOS levels after OGTT in patients with PCOS.

TESTICULAR ADRENAL REST TUMOR (TART) IN CONGENITAL ADRENAL HYPERPLASIA.

Ozisik H^1 , Yurekli BS^2 , Simsir IY^2 , Altun I^2 , Soyaltin U^2 , Guler E^3 , Onay H^4 , Sarsik B^5 , Saygili F^2 .

Eur J Med Genet. 2017 Sep;60(9):489-493. doi: 10.1016/j.ejmg.2017.06.009. Epub 2017 Jul 1.

Congenital adrenal hyperplasia is one of the most common autosomal recessive genetic disorders. Testicular adrenal tumors are significant complications of congenital adrenal hyperplasia. We would like to present two patients of testicular adrenal rest tumors. Patient 1 24 year-old male, he was diagnosed with congenital adrenal hyperplasia at the age of 8 due to precocious puberty. He received hydro-cortisone treatment until the age of 18. Testicular mass had been detected and right radical orchiectomy had been applied 6 months ago and reported as testicular adrenal rest tumor. In scrotal ultrasound, a mixed type mass lesion ($6 \times 4x3$ cm) covering a large part of left testis was observed. The imaging findings were consistent with adrenal rest tumor. The patient took adrenocorticotropic hormone supressive therapy with dexamethasone 0.75 mg once a day. Patient 2, 38 year-old male, he had been followed-up as adrenal insufficiency for 35 years. He underwent right orchiectomy operation due to the testicular mass in 2010 and the pathological examination revealed Leydig cell tumor. In scrotal ultrasound, small multifocal lesions were detected on the left testis and resection was done. It was reported as testicular adrenal rest tumor. He is being followed-up with glucocorticoid treatment according to androgen and adrenocorticotropic hormone levels. Early diagnosis of testicular adrenal rest tumor is significant in preventing irreversible testicular damage and infertility. In the differential diagnosis, we should keep in mind that testicular adrenal rest tumor can mimic other testicular tumors such as primary germ cell tumors.

ASYMMETRIC DIMETHYLARGININE LEVELS AND ATHEROSCLEROSIS MARKERS IN CUSHING SYNDROME.

Ozsurekci CG, Akturk M, Ozkan C, Gulbahar O, Altinova AE, Yalcin M, Arslan E, Toruner F.

Endocr Pract. 2016 Sep;22(9):1088-95. doi: 10.4158/EP15990.OR. Epub 2016 Jun 30.

OBJECTIVE: As a consequence of hypercortisolism, Cushing syndrome (CS) is frequently observed with other diseases that are associated with atherosclerosis, including diabetes mellitus, dyslipidemia, hypertension, and obesity. Cardiovascular disease (CVD) is the primary cause of mortality and morbidity in CS. We investigate CVD risk markers such as asymmetric dimethylarginine (ADMA), lipoprotein-associated phospholipase A2 (Lp-PLA2), highsensitive C-reactive protein (hsCRP), homocysteine, lipid levels, ankle-brachial index (ABI), and carotid intimamedia thickness (CIMT) in CS.

METHODS: Our study included 27 patients with CS and 27 age-, sex-, body mass index (BMI)-, and comorbid disease-matched control subjects.

RESULTS: Plasma ADMA levels were significantly lower in the CS group than the control group (P=.013). Total cholesterol, low-density lipoprotein, triglycerides, high-density lipoprotein, and apolipoprotein A1 and apolipoprotein B levels were higher in patients with CS than the control group (P<.05). We did not find any statistically significant differences in levels of hsCRP, Lp-PLA2, or homocysteine or CIMT and ABI measurements between the CS group and comorbidity-matched control group (P>.05).

CONCLUSION: We found that ADMA levels were lower in CS, the finding that should be further investigated. Levels of hsCRP, Lp-PLA2, and homocysteine levels and CIMT and ABI measurements were similar between the CS group and comorbidity-matched control group. None of these markers was prominent to show an increased risk of CVD in CS, independent of the comorbidities of CS.

 $\label{eq:ABBREVIATIONS:} ABI = ankle-brachial index Apo = apolipoprotein ADMA = asymmetric dimethylarginine BMI = body mass index CVD = cardiovascular disease CIMT = carotid intimamedia thickness CS = Cushing syndrome DM = diabetes mellitus DDAH = dimethylarginine dimethylaminohydrolase ELISA = enzyme-linked immunosorbent assay HDL = high-density lipoprotein hsCRP = high-sensitive C-reactive protein HOMA-IR = homeostatic model assessment of insulin resistance HT = hypertension LDL = low-density lipoprotein Lp-PLA2 = lipoprotein-associated phospholipase A2 Lp-a = lipoprotein a NO = nitric oxide.$

THE EFFECT OF PRIMARY HYPERPARATHYROIDISM ON PANCREATIC EXOCRINE FUNCTION.

Sisman P¹, Avci M², Akkurt A³, Sahin AB², Gul 00⁴, Ersoy C⁴, Erturk E⁴. J Endocrinol Invest. 2018 Mar;41(3):293–298. doi: 10.1007/s40618-017-0727-6. Epub 2017 Aug 2.

BACKGROUND: Elastase-1 is a proteolytic enzyme secreted by pancreatic acinar cells, and measurements of the concentration this enzyme are used to evaluate pancreatic exocrine function. We aimed to determine whether pancreatic exocrine function declines due to chronic hypercalcemia by measuring fecal elastase levels.

METHODS: 75 patients with primary hyperparathyroidism (18 men and 47 women) and 30 healthy subjects (11 men and 19 women) participated in this study. Renal function tests, lipid parameters, bone mineral density, and serum calcium, phosphorus, vitamin D, parathormone, glucose, and thyroid stimulating hormone levels as well as fecal elastase concentrations, were determined in these patients and controls.

RESULTS: The mean fecal elastase level was $335.3 \pm 181.4 \, \mu g/g$ in the PHPT group and $317.4 \pm 157.3 \, \mu g/g$ in the control group. There was no significant difference in fecal elastase levels between the two groups (p = 0.5).

CONCLUSIONS: Chronic hypercalcemia in primary hyperparathyroidism did not decrease the fecal elastase level, which is an indirect indicator of chronic pancreatitis; therefore, chronic hypercalcemia in PHPT may not cause chronic pancreatitis.

IRISIN AND MYOSTATIN LEVELS IN PATIENTS WITH GRAVES' DISEASE.

Yalcin MM¹, Akturk M², Tohma Y³, Cerit ET², Altinova AE², Arslan E², Yetkin I², Toruner FB².

Arch Med Res. 2016 Aug;47(6):471-475. doi: 10.1016/j.arcmed.2016.11.002.

BACKGROUND AND AIMS: Skeletal muscle system, which is one of the primary targets for thyroid hormones, has an important role in energy metabolism. Some myokines such as irisin and myostatin have considerable effects on energy metabolism in addition to the musculoskeletal system. Our aim was to investigate circulating irisin and myostatin levels in patients with Graves' Disease (GD).

METHODS: This study included 41 patients with GD who were in overt hyperthyroid status and 44 healthy subjects.

RESULTS: Serum irisin levels were higher in patients with hyperthyroidism than in control group (p = 0.003). However, there was no statistical difference in myostatin levels between groups (p = 0.21). Irisin levels were positively correlated with free triiodothyronine (FT3), free thyroxine (FT4), thyrotropin receptor antibody (TRAb) (p = 0.03, p = 0.02, p = 0.02, respectively) and negatively correlated with thyroid-stimulating hormone (TSH) (p = 0.006) in both groups. In multiple regression analysis, the presence of GD was the only significant factor associated with serum irisin levels (β = 0.29, p = 0.01). Myostatin levels were positively correlated with age, body mass index (BMI), FT4, HOMA-IR (p = 0.001, p = 0.04, p = 0.03, p = 0.03, respectively) and negatively correlated with TSH (p = 0.01). Multiple regression analysis also revealed that age and FT4 were the significant factors associated with circulating myostatin levels (β = 0.27, p = 0.02; β = 0.22, p = 0.04, respectively).

CONCLUSION: Our results suggest that increased irisin levels might contribute to altered energy metabolism in hyperthyroidism. Further studies to determine whether myostatin is affected due to hyperthyroidism are needed.

THE MEAN PLATELET VOLUME AND NEUTROPHIL TO LYMPHOCYTE RATIO IN OBESE AND LEAN PATIENTS WITH POLYCYSTIC OVARY SYNDROME.

Yilmaz MA¹, Duran C², Basaran M³.

J Endocrinol Invest. 2016 Jan;39(1):45-53. doi: 10.1007/s40618-015-0335-2. Epub 2015 Jun 23.

PURPOSE: Mean platelet volume (MPV) and neutrophil to lymphocyte ratio (NLR) are the new markers of the detection of inflammation. Our aim is to investigate MPV and NLR in lean and obese patients with polycystic ovary syndrome (PCOS).

METHODS: This study was designed to investigate MPV, NLR, and high-sensitive C-reactive protein (hsCRP) levels in 25 obese patients with PCOS and 16 lean patients with PCOS, and our study group was matched with 16 obese and 14 non-obese controls, respectively.

RESULTS: PCOS group had higher MPV, NLR, neutrophil count, neutrophil to total leucocyte ratio, basophil count, waist circumference (WC), insulin, glucose, and HOMA-IR rates than those of controls. hsCRP levels were similar in both groups. Subgroup analyses revealed that obese PCOS group had higher insulin and HOMA-IR levels, compared to those of controls. In this subgroup, total leucocyte counts, MPV, and hsCRP levels were similar. On the other hand, lean PCOS group had higher WC, NLR, MPV, and basophil count than controls. In correlation analysis, hsCRP was positively correlated with body mass index (BMI), WC, total leucocyte count, neutrophil count, while negatively correlated with lymphocyte ratio. Although leucocyte count was positively correlated with BMI, MPV was negatively correlated with BMI, total leucocyte, platelet, and neutrophil counts. NLR was positively correlated with HOMA-IR, hsCRP, BMI, WC, and insulin.

CONCLUSION: Our study demonstrated that MPV and NLR levels are increased despite similar hsCRP levels in patients with PCOS. However, we failed to demonstrate these differences in obese PCOS patients. Further studies with larger sample size are required to determine the significance of BMI in the inflammation of PCOS patients.

AT-101 ACTS AS ANTI-PROLIFERATIVE AND HORMONE SUPPRESSIVE AGENT IN MOUSE PITUITARY CORTICOTROPH TUMOR CELLS.

Yurekli BS¹, Karaca B², Kisim A³, Bozkurt E³, Atmaca H³, Cetinkalp S⁴, Ozgen G⁴, Yilmaz C⁴, Uzunoglu S³, Uslu R², Saygili F⁴.

J Endocrinol Invest. 2018 Feb;41(2):233-240. doi: 10.1007/s40618-017-0733-8. Epub 2017 lul 20.

PURPOSE: Gossypol, a naturally occurring compound in cottonseeds, has anticancer effects against several tumor cell lines. It has been extensively studied in clinical trials and is well tolerated with a favorable safety profile. AT-101, a derivative of R (-)-gossypol, binds to Bcl-2 family proteins and induces apoptosis in vitro. Although transsphenoidal surgical excision of the pituitary corticotroph adenoma is the gold standard of care, it is not successful all the time. Medical therapy for Cushing's disease still remains a challenge for the clinicians. We aimed to investigate the cytotoxic and apoptotic effects of AT-101 in mouse pituitary corticotroph tumor AtT20 cells.

METHODS: Cytotoxic effect of AT-101 was assessed by XTT cell viability assay. Apoptosis was shown by measuring DNA fragmentation and Caspase-3/7 activity. Changes in mRNA expressions of apoptosis-related genes were investigated by qPCR array after treatment with AT-101. ACTH was measured by ACTH-EIA Kit.

RESULTS: AT-101 induced cytotoxicity and apoptosis in AtT20 cells. mRNA levels of proapoptotic genes such as TNFR-SF-10B, Bid, PYCARD, Caspase-8, Caspase-3, and Caspase-7 were induced by 2.0-, 1.5-, 1.7-, 1.5-, 1.6-, and 2-fold, respectively, in AtT20 cells by AT-101 treatment. Moreover, some of the anti-apoptotic genes such as BCL2L10, NAIP1, and PAK-7 were reduced by 2.1-, 2.3-, 4.0-fold, respectively, in AtT20 cells. AT-101 also decreased ACTH secretion significantly.

CONCLUSION: AT-101 induces apoptosis in mouse pituitary corticotroph tumor cells.

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