

# TÜRKİYE ENDOKRİNOLOJİ VE METABOLİZMA DERNEĞİ BÜLTENİ



Üç ayda bir yayımlanır • Üyelere ücretsiz olarak gönderilir

Sayı 41 • Ocak - Şubat - Mart 2013

## TEMĐ TİROİD HASTALIKLARI KURSU



**TEMĐ** tiroid hastalıkları kurslarının 3.sü Kayseri'de 154 hekimin katılımı ile 23 Mart 2013 tarihinde gerçekleşti.

Tiroid Hastalıkları Tanı ve Tedavi Kılavuzu çerçevesinde toplumda sık görülen tiroid hastalıklarının sunulup tartışıldığı toplantıya iç hastalıkları ve aile hekimleri yoğun ilgi gösterdiler.

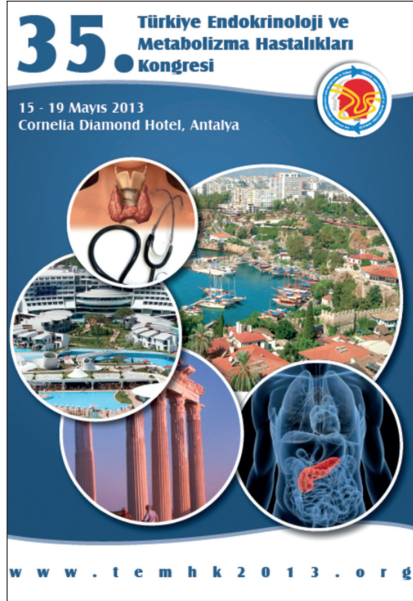
## HİPOFİZ ARAŞTIRMA MERKEZİ KURULDU

**K**ocaeli Üniversitesinde Endokrinoloji ve Metabolizma Bilim Dalı ve Beyin ve Sinir Hastalıkları Cerrahisi (Nöroşirürji) Anabilim Dalı işbirliği ile "**Hipofiz Araştırma Merkezi**" kuruldu. Merkezin açılışı ve duyurulması amacıyla açılış konferansı düzenlendi. Konuşmacı olarak İ.Ü. Cerrâşa Tıp Fakültesi Endokrinoloji ve Metabolizma Bilim Dalı Öğretim üyesi **Prof. Dr. Pınar KADIOĞLU** davet edildi. "**Akromegali**" konusunda konferans verdi. Toplantı KOÜ Rektör ve Tıp Fakültesi Dekan ve Başhekim, Sinir Sistemi Cerrahisi Derneği başkanı **Prof. Dr. Nurperi GAZİOĞLU**, öğretim üyeleri, araştırma görevlileri ve çevre illerden (Sakarya, Bolu, Düzce..) Endokrinoloji ve Beyin Cerrahisi uzmanlarının katılımı ile gerçekleştirildi.

*2013 yılının hepimize sağlık,  
mutluluk, başarı getirmesini  
dileriz.*



## KONGRE VE KURSLARIMIZ



## Bilimsel Kongreler ve Uluslararası Sempozyumlar

Ayrıntılara ve 2013 yılına ait Bilimsel Toplantı Takvimine derneğimiz internet sayfasından ([www.temd.org.tr](http://www.temd.org.tr)) ulaşabilirsiniz.

**18-21 Mart 2013**

Society for Endocrinology BES 2013, Harrogate, UK  
<http://www.endocrinology.org/meetings/2013/sfebes2013/index.aspx>

**17-20 Nisan 2013**

European Congress on Osteoporosis and Osteoarthritis (ESCEO13-IOF)  
Rome, Italy  
<http://www.ecceo13-iof.org/>

**27 Nisan - 01 Mayıs 2013**

15<sup>th</sup> European Congress of Endocrinology, Copenhagen, Denmark  
<http://www.ece2013.com/>

**1-5 Mayıs 2013**

AACE 22<sup>nd</sup> Annual Meeting & Clinical Congress, Phoenix, AZ  
<http://am.aace.com/>

**15-19 Mayıs 2013**

35. Türkiye Endokrinoloji ve Metabolizma Hastalıkları Kongresi  
Belek, Antalya  
<http://www.temhk2013.org/>

**30 Mayıs - 1 Haziran 2013**

13<sup>th</sup> ESE Postgraduate Training Course in Clinical Endocrinology  
Kosice, Slovakia  
<http://www.ece-hormones.org/meetings/>

**15-18 Haziran 2013**

The Endocrine Society's 95<sup>th</sup> Annual Meeting & Expo (ENDO 2013)  
San Francisco, CA  
<http://www.endo-society.org/endo2013/index.cfm>

**21-26 June 2013**

American Diabetes Association 73<sup>rd</sup> Scientific Sessions  
McCormick Place, Chicago, IL  
<http://professional.diabetes.org/Default.aspx>

**07-09 Eylül 2013**

37<sup>th</sup> Annual Meeting of the European Thyroid Association  
Leiden, The Netherlands  
<http://www.eta2013.org/>

**23-29 Eylül 2013**

49<sup>th</sup> EASD Annual Meeting  
Barcelona, Spain  
<http://www.easd.org/easd/>

**02-06 Ekim 2013**

15. Ulusal İç Hastalıkları Kongresi  
Belek, Antalya  
<http://www.ichastaliklari2013.org/>

**16-20 Ekim 2013**

83<sup>rd</sup> Annual Meeting of the ATA  
San Juan, Puerto Rico  
<http://www.thyroid.org/thyroid-events-education-media/83rd-annual-meeting-of-the-ata/>

**23-26 Ekim 2013**

Bridging the World of Endocrinology (ENDO BRIDGE 2013)  
Belek, Antalya  
[www.turkendokrin.org](http://www.turkendokrin.org)

**01-03 Aralık 2013**

3<sup>rd</sup> ENEA Workshop: Hypopituitarism  
Tel-Aviv, Israel  
<http://www.eneassoc.org/meetings.htm>

**02-06 Aralık 2013**

World Diabetes Congress Melbourne (IDF 2013)  
Melbourne, Australia  
<http://www.idf.org/worlddiabetescongress>

## Literatürden Seçmeler

### Effects of pulse methylprednisolone and oral methylprednisolone treatments on serum levels of oxidative stress markers in Graves' ophthalmopathy.

Akarsu E, Buyukhatipoglu H, Aktaran S, Kurtul N.

*Department of Endocrinology, Gaziantep University School of Medicine, Turkey.*

#### Abstract

**Background:** Recent evidence has shown that oxidative stress may play a role in the pathogenesis of autoimmune diseases, and this is an issue of considerable research interest in the field of infiltrative ophthalmopathy. Therefore, we evaluated both the relationship between Graves' ophthalmopathy (GO) and serum levels of certain indicators of oxidative stress, and the effects of methylprednisolone treatment on serum malondialdehyde (MDA) and glutathione (GSH) levels in patients with euthyroid GO.

**Materials and Methods:** We compared GO patients to both Graves' patients without ophthalmopathy and healthy controls. Ultimately, we assessed four subject groups. Graves' patients with ophthalmopathy (GO) were subcategorized into two groups: Group A subjects (n = 18) were given intravenous glucocorticoid and Group B patients (n = 15) were given oral glucocorticoid. Graves' patients without ophthalmopathy comprised Group C (n = 20), and healthy controls comprised Group D (n = 15). Serum levels of MDA and GSH were measured at baseline and after 4 and 24 weeks of observation via spectrophotometric methods.

**RESULTS:** We found that serum MDA levels were significantly higher in the two GO groups (Groups A and B) than in GO patients without ophthalmopathy or healthy controls. Conversely, GSH levels were significantly lower in the two GO groups than in Groups C and D. MDA and GSH levels were not different between the latter two groups. MDA levels were strongly and positively correlated with a clinical activity score (CAS). In Group A, MDA levels and the CAS were significantly lower than in Group B at 4 weeks. After 24 weeks, however, MDA levels and the CAS were similar in these two groups.

**Conclusion:** Oxidative stress appears to be involved in the pathophysiology of GO. Relative to oral dosing, the intravenous administration of a glucocorticoid seems to yield more rapid improvement in disease activity. MDA might be useful as an indicator of clinical activity.

### Changes in inflammatory and metabolic parameters after periodontal treatment in patients with and without obesity.

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*Department of Periodontology, Faculty of Dentistry, Ankara University, Ankara, Turkey.*

#### Abstract

**Background:** Non-surgical periodontal treatment decreases serum levels of inflammatory cytokines in patients with and without obesity. However, the changes in metabolic parameters in association with these decreases in levels of inflammatory markers by periodontal treatment have not been evaluated in patients with obesity. The aim of this study is to evaluate the short-term changes in systemic inflammatory, lipid, and glucose parameters in the presence of obesity after periodontal treatment.

**Methods:** The study included 22 dyslipemic patients with obesity and 24 healthy individuals without obesity with generalized chronic periodontitis. The periodontal parameters, anthropometric measurements, and serum levels of triglyceride, total cholesterol, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, and lipoprotein-a, high-sensitive C-reactive protein, fasting blood glucose, insulin, interleukin-6 (IL-6), tumor necrosis factor- $\alpha$  (TNF- $\alpha$ ), and leptin were measured. A homeostasis model assessment of the insulin resistance (HOMA-IR) score was calculated before and 3 months after non-surgical periodontal treatment.

**Results:** Both groups responded well to the periodontal treatment in terms of periodontal parameters. The treatment was also associated with a decrease in serum TNF- $\alpha$  and IL-6 levels and HOMA-IR scores in individuals with obesity and with a decrease in IL-6 levels in patients without obesity. Conversely, there were insignificant decreases in lipid profiles and serum fasting glucose of patients with obesity.

**Conclusion:** The non-surgical periodontal treatment causes a decrease in the levels of some circulating proinflammatory cytokines and may be associated with a decrease in insulin resistance in the obese population.

### High frequency of aspirin resistance in patients with nephrotic syndrome.

Akoglu H, Ağbaht K, Piskinpasa S, Falay MY, Dede F, Özet G, Odabas AR.

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#### Abstract

**Background:** Aspirin has a beneficial role in prevention of cardiovascular and thromboembolic events. Patients may experience thromboembolic events despite aspirin treatment, a phenomenon called aspirin resistance. We evaluated the frequency of aspirin resistance and its correlation with clinical and biochemical parameters among patients with nephrotic syndrome (NS).

**Methods:** A total of 83 patients (50 males, 33 females, age range 18-79 years) with NS using aspirin 100 mg/day were included in the study. Demographic information and aetiology of NS based on the histology of a renal biopsy were recorded for each patient. Blood samples were drawn to investigate the association of aspirin resistance with inflammation and thrombotic risk factors. Aspirin resistance was defined as a normal collagen/epinephrine closure time <159 s using a platelet function analyzer (PFA-100).

**Results:** Aspirin resistance was determined in 51 patients (61.4%). The number of patients exposed to azathioprine therapy was significantly higher in the aspirin-sensitive group (P=0.043), whereas patients exposed to cyclosporine therapy were significantly higher in the aspirin-resistant group (P=0.017). More patients in the aspirin-resistant group were on angiotensin-converting enzyme inhibitor therapy compared with the aspirin-sensitive group (P=0.024). The aspirin-resistant group showed significantly higher serum low-density lipoprotein cholesterol (LDL-C) (151 $\pm$ 47 versus 104 $\pm$ 21 mg/dL; P<0.001), triglyceride levels (192 $\pm$ 116 versus 134 $\pm$ 82 mg/dL; P=0.015) and glomerular filtration rates (91.8 $\pm$ 43.0 versus 74.0 $\pm$ 35.6 mL/min/1.73 m<sup>2</sup>; P=0.044) compared with the aspirin-sensitive group. In multivariate analysis, LDL-C was the only parameter associated independently with aspirin resistance [odds ratio (OR) 1.04, 95% confidence interval (CI) 1.02-1.06; P=0.004].

**Conclusions:** A significant number of patients with NS are resistant to aspirin therapy. Serum LDL-C level is closely associated with aspirin resistance in NS.



**Increased frequency of anxiety, depression, quality of life and sexual life in young hypogonadotropic hypogonadal males and impacts of testosterone replacement therapy on these conditions.**

Aydogan U, Aydogdu A, Akbulut H, Sonmez A, Yuksel S, Basaran Y, Uzun O, Bolu E, Saglam K.

*Department of Family Medicine, Gulhane School of Medicine, Ankara, Turkey.***Abstract**

Hypogonadotropic hypogonadism is defined as the failure in production of gonadal hormones, thus resulting in lower amounts of testosterone. Depression, anxiety and decreased quality of life are the most common psychopathological conditions in young hypogonadal men. The aim of the present study was to assess the still debated relationship with testosterone levels and psychological symptoms in young male patients with congenital hypogonadotropic hypogonadism (CHH). Thirty-nine young male patients with CHH and 40 age-matched healthy males were enrolled in the present study. The impact of testosterone replacement treatment (TRT) on the patients' anxiety and depression levels, sexual function and quality of life were assessed before and after 6 months of treatment using valid and reliable scales, including the Short Form-36 (SF-36), Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), and Arizona Sexual Experiences (ASEX). Patients with CHH had significantly higher scores for BDI, BAI, and ASEX than the control subjects at baseline ( $p=0.011$ ,  $p=0.036$ ,  $p<0.001$ , respectively). The ASEX and BDI scores significantly improved after the TRT ( $p<0.001$  for both), while the improvement in the BAI score was not statistically significant ( $p=0.135$ ). When compared to the control group, treatment naïve hypogonadal patients had more severe symptoms of sexual dysfunction, anxiety, depression, and worse quality of life. After 6 months of TRT, we observed improvements in the above parameters, suggesting that low endogenous levels of testosterone might be related to the increased incidence of psychological symptoms.

**The relationship of epicardial adipose tissue thickness to clinical and biochemical features in women with polycystic ovary syndrome.**

Aydogdu A, Uckaya G, Tasci I, Baysan O, Tapan S, Bugan B, Serdar M, Akbulut H, Aydogan U, Sonmez A, Aydogdu S, Kutlu M.

*Department of Endocrinology and Metabolism, Gulhane School of Medicine, Ankara, Turkey.***Abstract**

The amount of epicardial adipose tissue (EAT), a component of body visceral adiposity, has been linked to the presence and severity of cardiovascular disease through multiple mechanisms. Polycystic ovary syndrome (PCOS) is characterized by insulin resistance and subclinical inflammation, which participate in the mechanism of atherosclerosis. We searched if the patients with PCOS have increased EAT thickness (EATT), along with its relation to the measures of adiposity and insulin sensitivity. A total of 41 subjects with PCOS and 46 age and body mass index (BMI) matched healthy controls were enrolled. EAT was measured by echocardiography above the free wall of the right ventricle. Insulin resistance was assessed by homeostasis model assessment of insulin resistance (HOMA-IR) formula, and plasma adiponectin level was measured by ELISA. Compared to healthy controls EATT and HOMA-IR score were significantly higher ( $p=0.0001$  for both) while plasma adiponectin concentration was significantly lower ( $p=0.048$ ) in women with PCOS. EATT correlated positively with total cholesterol, triglyceride, luteinizing hormone (LH) and negatively with sex hormone binding globuline ( $p<0.05$  for all), whereas it displayed no correlation to plasma adiponectin level ( $p=0.924$ ). Triglyceride level was the significant determinant of EATT in logistic regression analysis ( $p=0.035$ ). Thickness of the EAT is increased in patients with PCOS in conjunction with hyperandrogenity. Prospective studies are required to identify the relation of EAT and cardiovascular risk in patients with PCOS.

**Subclinical atherosclerosis and hyperandrogenemia are independent risk factors for increased epicardial fat thickness in patients with PCOS and idiopathic hirsutism.**

Cakir E, Doğan M, Topaloglu O, Ozbek M, Cakal E, Vural MG, Yeter E, Delibası T.

*Department of Endocrinology and Metabolic Diseases, Diskapi Training and Research Hospital, Demetevler 1. cadde, 81-10, Altindag, TR-06200, Ankara, Turkey.***Abstract**

**Objective:** Polycystic ovary syndrome (PCOS) is one of the most common endocrine disorders affecting reproductive-age women and is reported to be associated with an increased risk of cardiovascular disease and early atherosclerosis. Epicardial fat thickness (EF) is clinically related to subclinical atherosclerosis and visceral fat changes. Therefore, the objective of this study is to compare the carotid artery intima-media thickness (CIMT), EF and cardiometabolic risk factors in patients with PCOS, patients with idiopathic hirsutism (IH) and healthy controls.

**Methods:** This cross-sectional controlled study was conducted in a training and research hospital. The study population consisted of 50 reproductive-age PCOS women, 34 women with IH and 39 control subjects. We evaluated anthropometric, hormonal and metabolic parameters as well as CIMT and EF measurements in PCOS patients, IH patients and controls.

**Results:** The mean fasting insulin, HOMA-IR, hsCRP, GGT, CIMT, and EF levels were significantly higher in patients with PCOS and IH ( $p < 0.05$ ). A significant positive correlation was found between EF and age, BMI, WHR, Ferriman Gallwey score (FG), fasting insulin, HOMA-IR, triglyceride, total cholesterol, LDL-C, 17 OH progesterone, free testosterone, CIMT, hsCRP, and GGT, whereas a significant negative correlation was observed between EF and HDL-C ( $p < 0.05$ ). In the multiple linear regression analyses, EF was found to be associated with the FG ( $\beta$  coefficient: 0.389,  $p < 0.001$ ), CIMT ( $\beta$  coefficient: 0.376,  $p < 0.001$ ) and free testosterone levels ( $\beta$  coefficient: 0.173,  $p < 0.038$ ).

**Conclusion:** EF appears to be a marker that will enable the detection of the cardiometabolic response in patients with PCOS and IH, even at an early stage.

**Heart type fatty acid binding protein response and subsequent development of atherosclerosis in insulin resistant polycystic ovary syndrome patients.**

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*Department of Endocrinology and Metabolic Diseases, Diskapi Training and Research Hospital, Ankara, Turkey.*

**Abstract**

**Background:** Women with polycystic ovary syndrome (PCOS) have higher risk for cardiovascular disease (CVD). Heart type fatty acid binding protein (HFABP) has been found to be predictive for myocardial ischemia. We tested whether HFABP is the predictor for CVD in PCOS patients, who have an increased risk of cardiovascular disease.

**Methods:** This was a prospective, cross sectional controlled study conducted in a training and research hospital. The study population consisted of 46 reproductive-age PCOS women and 28 control subjects. We evaluated anthropometric and metabolic parameters, carotid intima media thickness and HFABP levels in both PCOS patients and control group.

**Results:** Mean fasting insulin, homeostasis model assessment insulin resistance index (HOMA-IR), triglyceride, total cholesterol, low density lipoprotein cholesterol, free testosterone, total testosterone, carotid intima media thickness (CIMT) levels were significantly higher in PCOS patients. Although HFABP levels were higher in PCOS patients, the difference did not reach statistically significant in early age groups. After adjustment for age and body mass index, HFABP level was positive correlated with hsCRP, free testosterone levels, CIMT and HOMA-IR.

**Conclusions:** Heart type free fatty acid binding protein appeared to have an important role in metabolic response and subsequent development of atherosclerosis in insulin resistant, hyperandrogenemic PCOS patients.

**The relationship between LH and thyroid volume in patients with PCOS.**

Cakir E, Sahin M, Topaloglu O, Colak NB, Karbek B, Gungunes A, Arslan MS, Unsal IO, Tural E, Ucan B, Delibasi T.

*Department of Endocrinology and Metabolic Diseases, Diskapi Training and Research Hospital, Ankara, Turkey.*

**Abstract**

**Background:** Thyroid volume (TV) has been found to be associated with age, anthropometry, smoking, iodine status and hyperinsulinemia. Hyperinsulinemia is frequent finding in patients with PCOS and has associations with TV. However, the TV has been evaluated only a few studies in patients with PCOS. Therefore, the aim of this study was to evaluate the biochemical and hormonal variables in patients with PCOS comparing with the controls and their relationships between TV.

**Methods:** This was a case-control study conducted in a training and research hospital. The study population consisted of 47 reproductive-age PCOS women and 30 control subjects. We evaluated anthropometric, biochemical and hormonal parameters as well as thyroid volume in PCOS patients and controls. Insulin resistance was calculated using the homeostasis model assessment insulin resistance index (HOMA-IR).

**Results:** Mean age, BMI, thyroid stimulant hormone (TSH) levels and TV were similar between groups ( $p < 0.05$ ). The HOMA-IR and free T4 levels were higher in patients with PCOS. However, hyperinsulinemia and insulin resistance were not found to be associated with TV. Thyroid volume was positively correlated with the LH and anti TPO levels. The participants were divided into 2 groups according to HOMA-IR levels. The mean TV measurement was higher in group with higher HOMA-IR levels, but the difference was not significant in young age PCOS patients.

**Conclusion:** In early age PCOS patients it was observed that insulin resistance had no effect on TV. In this case, anti TPO and LH have dominant effect on TV. Chronic stimulation with LH and insulin may lead to increase in TV in later stages of the PCOS diseases.

**Adrenocortical steroid response to ACTH in different phenotypes of non-obese polycystic ovary syndrome.**

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*Endocrinology and Metabolism Unit, Department of Internal Medicine, Hacettepe University School of Medicine Hacettepe, Ankara, Turkey*

**Abstract**

**Background:** Adrenal androgen excess is frequently observed in PCOS. The aim of the study was to determine whether adrenal gland function varies among PCOS phenotypes, women with hyperandrogenism (H) only and healthy women.

**Methods:** The study included 119 non-obese patients with PCOS (age:  $22.2 \pm 4.1$  y, BMI:  $22.5 \pm 3.1$  kg/m<sup>2</sup>), 24 women with H only and 39 age and BMI- matched controls. Among women with PCOS, 50 had H, oligo-anovulation (O), and polycystic ovaries (P) (PHO), 32 had O and H (OH), 23 had P and H (PH), and 14 had P and O (PO). Total testosterone (T), SHBG and DHEAS levels at basal and serum 17-hydroxprogesterone (17-OHP), androstenedione (A4), DHEA and cortisol levels after ACTH stimulation were measured.

**Results:** T, FAI and DHEAS, and basal and AUC values for 17-OHP and A4 were significantly and similarly higher in PCOS and H groups than controls ( $p < 0.05$  for all) whereas three groups did not differ for basal or AUC values of DHEA and cortisol. Three hyperandrogenic subphenotypes (PHO, OH, and PH) compared to non-hyperandrogenic subphenotype (PO) had significantly and similarly higher T, FAI, DHEAS and AUC values for 17-OHP, A4 and DHEA ( $p < 0.05$ ). All subphenotypes had similar basal and AUC values for cortisol.

**Conclusion:** PCOS patients and women with H only have similar and higher basal and stimulated adrenal androgen levels than controls. All three hyperandrogenic subphenotypes of PCOS exhibit similar and higher basal and stimulated adrenal androgen secretion patterns compared to non-hyperandrogenic subphenotype.

**Resistin and leptin levels in acromegaly: lack of correlation with echocardiographic findings.**

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**Abstract**

**Purpose:** To find out how resistin and leptin levels were affected in patients with acromegaly and whether there is a relation between resistin levels and cardiac parameters. We also aimed to investigate whether resistin and leptin may be a link between insulin resistance and cardiac functions as well as these affected cardiac functions in the patients with acromegaly.

**Methods:** We included 30 subjects (15 men and 15 women) who had a diagnosis of acromegaly and 30 healthy (10 men and 20 women) subjects. Serum glucose, insulin, growth hormone, insulinlike growth factor 1 (IGF-1), resistin, and leptin levels were obtained, and insulin resistance of subjects were calculated. Echocardiographic studies of the subjects were performed.

**Results:** Resistin levels of the patients with acromegaly were found lower than controls. This difference was statistically significant ( $P = 0.001$ ). Leptin levels were lower in the patients with acromegaly than in the controls, but this difference was not statistically significant. Resistin and leptin levels were not correlated with growth hormone, IGF-1, and with insulin-like growth factor binding protein 3 levels. Homeostasis model assessment of insulin resistance was positively correlated with resistin levels. ( $P = 0.03$ ;  $r = 0.531$ ) but not correlated with leptin levels. There was a positive correlation between body mass index and leptin levels in the patients with acromegaly ( $P = 0.007$ ;  $r = 0.482$ ). Interventricular septum thickness, posterior wall thickness, left ventricle mass index, peak early mitral inflow velocity-peak late mitral inflow velocity ratio, deceleration time, ejection time, isovolumetric relaxation time, velocity propagation, and left ventricular end-systolic volume values were significantly greater in the patients with acromegaly. Leptin levels in the acromegalic patients were not correlated with any of them.

**Conclusions:** We found biventricular hypertrophy and impairment of diastolic and systolic function in the patients with acromegaly. We conclude that changes in resistin and leptin levels are unlikely to account for the insulin resistance of acromegaly. They do not also seem to be contributing factors of cardiovascular changes in patients with acromegaly.

**Serum uric acid independently predicts cardiovascular events in advanced nephropathy.**

Kanbay M, Yilmaz MI, Sonmez A, Solak Y, Sağlam M, Cakir E, Unal HU, Arslan E, Verim S, Madero M, Caglar K, Oguz Y, McFann K, Johnson RJ.

*Department of Nephrology, Gülhane School of Medicine, Ankara, Turkey.*

**Abstract**

**Background:** Chronic kidney disease (CKD) is associated with increased risk for cardiovascular (CV) disease and is also associated with elevated uric acid, which is emerging as a nontraditional CV risk factor. We therefore evaluated uric acid as a risk factor for CV disease in subjects presenting to nephrologists with CKD who were not on medications known to alter endothelial function.

**Methods:** 303 subjects with stage 3-5 CKD were followed for a mean of 39 months (range 6-46) and assessed for fatal and nonfatal CV events. Hyperuricemia was defined as uric acid  $>6.0$  mg/dl for women and  $>7.0$  mg/dl for men. In addition to other CV risk factors, endothelial function (flow-mediated dilatation), inflammatory markers (hsCRP), and insulin resistance (HOMA index and fasting insulin levels) were included in the analysis. We evaluated the association between uric acid and flow-mediated dilatation with linear regression. The impact of uric acid on composite CV events was assessed with Cox regression analysis.

**Results:** Of a total of 303 patients, 89 had normouricemia and 214 had hyperuricemia. Both fatal (32 of 214 vs. 1 of 89 subjects) and combined fatal and nonfatal (100 of 214 vs. 13 of 89 subjects) CV events were more common in subjects with hyperuricemia compared with normal uric acid levels, and this was independent of estimated glomerular filtration rate, traditional CV risk factors including diabetes, hypertension and BMI, and nontraditional risk factors (hsCRP and endothelial function). The 46-month survival rate was 98.7% in the group with low uric acid compared to 85.8% in patients with high uric acid ( $p = 0.002$ ).

**Conclusions:** Hyperuricemia is an independent risk factor for CV events in subjects presenting with CKD who are not on medications known to alter endothelial function.

**Routine screening for Cushing's syndrome is not required in patients presenting with hirsutism.**

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*Departments of Endocrinology, Erciyes University Medical School, Kayseri, Turkey.*

**Abstract**

**Context:** Prevalence of Cushing's syndrome (CS) in patients presenting with hirsutism is not well known.

**Objective:** Screening of CS in patients with hirsutism.

**Setting:** Referral hospital.

**Patients and Other Participants:** This study was carried out on 105 patients who were admitted to the Endocrinology Department with the complaint of hirsutism.

**Intervention:** All the patients were evaluated with low-dose dexamethasone suppression test (LDDST) for CS.

**Main Outcome Measure:** Response to LDDST in patients presenting with hirsutism.

**Results:** All the patients had suppressed cortisol levels following low-dose dexamethasone administration excluding CS. The etiology of hirsutism was polycystic ovary syndrome in 79%, idiopathic hirsutism in 13%, idiopathic hyperandrogenemia in 6%, and nonclassical congenital hyperplasia in 2% of the patients.

**Conclusion:** Routine screening for CS in patients with a referral diagnosis of hirsutism is not required. For the time being, diagnostic tests for CS in hirsute patients should be limited to patients who have accompanying clinical stigmata of hypercortisolism.

**Three years prospective investigation of pituitary functions following subarachnoid haemorrhage.**

Karaca Z, Tanrıverdi F, Daglı AT, Selçuklu A, Casanueva FF, Unluhizarci K, Keleştimur F.

*Department of Endocrinology, Erciyes University Medical School, Kayseri, Turkey.*

**Abstract**

Subarachnoid haemorrhage (SAH) is known to be related to pituitary dysfunction in retrospective and short-term prospective studies. We aimed to investigate pituitary functions in patients with SAH in longer follow-up periods to demonstrate if pituitary hormone deficiencies recover, persist or new hormone deficiencies occur. Twenty patients with SAH, who were followed up for 3 years, were included in the present study. Patients were evaluated with basal hormone levels and glucagon stimulation test (GST). Serum basal cortisol and adrenocorticotropic hormone (ACTH) levels were found to be significantly elevated at 3rd year of SAH compared to 1st year. Other basal hormone levels at 3rd year did not show a significant change from the levels found at 1st year. One of the patients had ACTH deficiency at 1st year of SAH and recovered at 3rd year. Growth hormone (GH) deficiency, according to GST, was diagnosed in 4 patients. One patient with GH deficiency at first year was still deficient, 3 of them recovered and 3 patients were found to have new-onset GH deficiency 3 years after SAH. SAH is associated with anterior pituitary dysfunction and GH is the most frequently found deficient hormone in the patients. Although one year after SAH seems to be an appropriate time for the evaluation of pituitary functions, further follow-up may be required at least in some cases due to recovered and new-onset hormone deficiencies at 3rd year of SAH.

**The effects of treatment with drospirenone/ethinyl oestradiol alone or in combination with metformin on elastic properties of aorta in women with polycystic ovary syndrome.**

Kaya MG, Calapkorur B, Karaca Z, Yildirim S, Celik A, Akpek M, Unluhizarci K, Kelestimur F.

*Department of Cardiology, Erciyes University, Kayseri, Turkey.*

**Abstract**

**Background:** Polycystic ovary syndrome (PCOS) is a heterogeneous clinical condition. Oral contraceptive pills (OCPs) have conventionally been the mainstay of treatment for the amelioration of hyperandrogenism and regulation of menstrual cycles in women with PCOS. Metformin has beneficial effects on insulin resistance and endothelial functions. To our knowledge, the effect of metformin/OCP combination treatment on aortic stiffness has not been studied so far.

**Objective:** The aim of this study was to investigate the effects of treatment with drospirenone/ethinyl oestradiol (E/E) alone or in combination with metformin on the elastic properties of the aorta in women with PCOS.

**Methods:** Thirty-seven women with PCOS were enrolled in the study. The first treatment arm, which was treated with OCP alone, was described as the OCP group (19 patients, mean age:  $23.2 \pm 5.4$ ); the other treatment arm, which was treated with OCP and metformin, was described as the combination group (18 patients, mean age:  $23.0 \pm 4.5$ ). The elastic parameters of the aorta namely 'aortic strain', 'aortic distensibility', 'aortic diameter alteration' and 'aortic stiffness index' were calculated by the appropriate formulae. The hormonal profile, HOMA-IR score, basal insulin and glucose levels were studied in both groups. Before and after 6 months of treatment, echocardiographic measurements and laboratory tests were also obtained.

**RESULTS:** After 6 months of treatment, significant weight loss and decrease in body mass index (BMI) were observed in the combination group ( $75.3 \pm 13.3$  kg to  $72.3 \pm 13.5$  kg and  $31.7 \pm 7.3$  kg/m<sup>2</sup> vs  $30.4 \pm 7.3$  kg/m<sup>2</sup>,  $P = 0.001$  and  $P = 0.001$ , respectively). Conversely in the OCP group, BMI and weight were not significantly different after 6 months of treatment ( $68.8 \pm 18.3$  kg to  $71.6 \pm 21.2$  kg and  $26.4 \pm 6.2$  kg/m<sup>2</sup> to  $27.4 \pm 6.9$  kg/m<sup>2</sup>,  $P = 0.159$  and  $P = 0.149$ , respectively). In addition, there were no significant differences in aortic strain, distensibility ( $7.7 \pm 4.2$  to  $7.8 \pm 3.6$  and  $7.2 \pm 4.1$  to  $7.7 \pm 3.6$ ,  $P = 0.926$  and  $P = 0.593$ , respectively) and stiffness index in the OCP group ( $8.8 \pm 7.4$  to  $8.2 \pm 6.7$ ,  $P = 0.772$ ). However, in the combination group, the adjusted values of the aortic stiffness index decreased significantly at the 6 months' follow-up ( $10.0 \pm 1.5$  to  $6.7 \pm 0.3$ ,  $P = 0.021$ ) and aortic distensibility and strain increased but not significantly ( $7.0 \pm 4.3$  to  $9.3 \pm 3.3$  and  $6.8 \pm 3.9$  to  $9.4 \pm 3.5$ ,  $P = 0.163$  and  $P = 0.071$ , respectively) at the 6 months' follow-up.

**Conclusion:** We demonstrated an improvement in the elastic parameters of the aorta by adding metformin to OCP treatment. We suggest that metformin plus OCP treatment may decrease cardiovascular disease risk in women with PCOS.

**Is there any association between the Ser326Cys polymorphism of the 8-oxoguanine glycosylase 1 (OGG1) gene and risk of colon polyp and abnormal glucose tolerance in acromegaly patients?**

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**Abstract**

**Aim:** Evidence arising from experimental studies indicates an association between increased levels of the growth hormone/insulin-like growth factor 1 and oxidative stress. The association of the Ser326Cys polymorphism in the 8-oxoguanine glycosylase (OGG1) gene with a colon carcinoma and diabetes mellitus has been examined. The aim of the study was to compare the genotypic distribution of OGG1 Ser326Cys between acromegaly patients and nonacromegalic subjects and to explore whether this polymorphism is associated with a colon polyp risk and abnormal glucose tolerance. **Methods:** We examined 98 acromegaly patients, and 99 healthy subjects who can be compared in terms of age and gender. All participants were evaluated by anthropometric and biochemical measurements. Also, a 75-g oral glucose test and colonoscopy was applied to the patients. Genomic DNA was isolated from peripheral blood leucocytes and the genotype was assessed by melting temperature analyses after using a real-time polymerase chain reaction protocol. **Results:** Colon polyps were detected in 13 (30.2%) of 43 patients who underwent the colonoscopy. Except for diastolic blood pressure, clinical and biochemical characteristics were similar between the patients diagnosed with and without a colon polyp. A higher proportion of acromegaly patients had the Ser326Ser genotype when compared to the control group ( $p=0.007$ ). Genotypes were similar between the patients with a normal glucose tolerance and an abnormal glucose tolerance ( $p=0.774$ ). The frequency of the Cys allele was significantly higher in patients with polyps than those without a polyp (38.5% vs. 18.3%) ( $p=0.029$ ). **Conclusion:** Our results suggest that the Cys allele may influence the colon polyp risk in acromegaly patients. Large-scale studies with acromegaly patients are required to show whether being a carrier of the Cys allele is associated with the risk of a colorectal polyp.

**Immunohistochemical expression of ErbB2 in adamantinomatous craniopharyngiomas: a possible target for immunotherapy.**

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**Abstract**

**AIM:** To determine the immunohistochemical expression of ErbB2 in adamantinomatous craniopharyngiomas (ACP) and to assess its relationship with nuclear expression of  $\beta$ -catenin in surgically resected human ACP tissue sections and to estimate whether these tumors could be candidates for anti-ErbB2 therapy. **MATERIAL and METHODS:** The ErbB2 and  $\beta$ -catenin immunostaining was performed on paraffin embedded tissue sections of 20 ACP using avidin-biotin-peroxidase complex method. ErbB2 immunoreactivity was interpreted according to the American Society of Clinical Oncology/ College of American Pathologists criteria for breast carcinoma.

**RESULTS:** Foci of nuclear reactivity for  $\beta$ -catenin was observed in all ACP tissue specimens mainly concentrated in whorl like arrays of the epithelial cells. Two (10%) of the cases were score 3+ for ErbB2 as demonstrated by strong complete membrane staining. However, the localization of 3+ ErbB2 cells was different from those with nuclear  $\beta$ -catenin immunoreactivity.

**Conclusion:** Our preliminary data demonstrate score 3+ staining for ErbB2 in 10% of ACP and different localization of 3+ ErbB2 cells and cells with nuclear  $\beta$ -catenin immunoreactivity. However, because of the small number of cases, further studies with larger samples should be conducted to verify and validate our preliminary data and to determine the effect of ErbB2 protein in ACP cell growth, survival and differentiation.



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## Dernek Yayınları

Marmara bölgesi endokrinologlarının 2012 yılı içinde gerçekleştirdikleri vaka toplantılarında sunulan vakalar "Endokrin vakalar" başlığı altında yayınlanmıştır. "Endokrin vakalar 2013" başlıklı yayın web sitemiz içinde diğer yayınlar bölümünde yer almaktadır.

## Duyurular

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