Türkiye Endokrinoloji ve Metabolizma Derneği Bülteni

Üç ayda bir yayılır • Üyelere ücretsiz olarak gönderilir

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Insulin degludec, an ultra-longacting basal insulin, versus insulin glargine in basal-bolus treatment with mealtime insulin aspart in type 2 diabetes (BEGIN Basal-Bolus Type 2): a phase 3, randomised, open-label, treat-to-target non-inferiority trial.


Abstract

Background: Basal insulin therapy does not stop loss of β-cell function, which is the hallmark of type 2 diabetes mellitus, and thus diabetes control inevitably deteriorates. Insulin degludec is a new, ultra-longacting basal insulin. We aimed to assess efficacy and safety of insulin degludec compared with insulin glargine in patients with type 2 diabetes mellitus.

Methods: In this 52 week, phase 3, open-label, treat-to-target, non-inferiority trial, undertaken at 123 sites in 12 countries, we enrolled adults (aged ≥18 years) with type 2 diabetes mellitus and a glycated haemoglobin (HbA(1c)) of 7.0-10.0% after 3 months or more of any insulin regimen (with or without oral antidiabetic drugs). We randomly allocated eligible participants in a 3:1 ratio to receive once-daily subcutaneous insulin degludec or glargine, stratified by previous insulin regimen, via a central interactive response system. Basal insulin was titrated to a target plasma glucose concentration of 3.9-<5.0 mmol/L self-measured before breakfast. The primary outcome was non-inferiority of degludec to glargine measured by change in HbA(1c) from baseline to week 52 (non-inferiority limit of 0.4%) by ANOVA in the full analysis set. We assessed rates of hypoglycaemia in all treated patients. This study is registered with ClinicalTrials.gov, number NCT00972283.

Findings: 744 (99%) of 755 participants randomly allocated degludec and 248 (99%) of 251 allocated glargine were included in the full analysis set (mean age 58.9 years [SD 9.3], diabetes duration 13.5 years [7.3], HbA(1c) 8.3% [0.8], and fasting plasma glucose 9.2 mmol/L [3.1]); 618 (82%) and 211 (84%) participants completed the trial. After 1 year, HbA(1c) decreased by 1.1% in the degludec group and 1.2% in the glargine group (estimated treatment difference [degludec-glargine] 0.08%, 95% CI -0.05 to 0.21), confirming non-inferiority. Rates of overall confirmed hypoglycaemia (plasma glucose <3.1 mmol/L or severe episodes requiring assistance) were lower with degludec than glargine (11.1 vs 13.6 episodes per patient-year of exposure; estimated rate ratio 0.82, 95% CI 0.69 to 0.99; p=0.0359), as were rates of nocturnal confirmed hypoglycaemia (1.4 vs 1.8 episodes per patient-year of exposure for degludec and glargine) but were too low for assessment of differences. Rates of other adverse events did not differ between groups.

Interpretation: A policy of suboptimum diabetes control to reduce the risk of hypoglycaemia and its consequences in advanced type 2 diabetes mellitus might be unwarranted with newer basal insulins such as degludec, which are associated with lower risks of hypoglycaemia than insulin glargine.
A patient-based study on the adherence of physicians to guidelines for the management of type 2 diabetes in Turkey.

Satman I, Imamoglu S, Yılmaz C; ADMIRE Study Group.
Division of Endocrinology & Metabolism, Department of Internal Medicine, Istanbul Faculty of Medicine, Istanbul University, 34093 Istanbul, Turkey. satmandiabet@gmail.com

Aims: To evaluate physicians’ adherence to guidelines by Diabetes Study Group of The Society of Endocrinology and Metabolism of Turkey (SEMT).
Methods: The medical records of 1790 patients with type 2 diabetes (mean age, 58.7 ± 10.9 years; diabetes duration, 7.7 ± 7.5 years) followed by 180 physicians during last 12 months were reviewed. Adherence to SEMT guidelines was assessed using medical history, physical examination and laboratory evaluations subheadings, each scored on a 10-point scale. Effects of patients’ age, gender, diabetes duration, body mass index, chronic complications, physicians’ specialty and institution on guideline adherence were evaluated.
Results: Follow-up procedures were >75% compliant for 52% of patients. Full adherence to medical history, physical examination and laboratory aspects of SEMT guidelines were met in 68.6%, 8.3% and 19.2% of patients, respectively. Older patients and males fared better for laboratory evaluations. All aspects of guideline adherence were poor in patients with short duration of diabetes and in the absence of chronic complications. State institutions and family practitioners had lower adherence scores for physical examination and laboratory evaluation.
Conclusions: Overall guideline adherence of physicians was suboptimal. Educational programs emphasizing the preventive aspect of diabetes management, targeted towards family practitioners and state institutions, may improve guideline adherence and patient outcome.

Ultrasound elastography is not superior to grayscale ultrasound in predicting malignancy in thyroid nodules.

Unlütürk U, Erdoğan MF, Demir O, Güllü S, Başkal N.
Department of Endocrinology and Metabolism, Ankara University School of Medicine, Ankara, Turkey. ugarunlaturk@gmail.com

Abstract
Background: Several studies have evaluated the ability of ultrasound elastography (USE) to diagnose malignant nodules. However, these studies had important limiting factors, selection bias and small sample size. The aims of the present study were to prospectively assess, in a large group of patients, the diagnostic power of USE for detecting malignancy in thyroid nodules, and to compare this technique with B-mode grayscale ultrasonography (BUS) and power Doppler ultrasonography (PD).
Method: There were 194 patients with 237 thyroid nodules who were examined using BUS, PD, and USE. USE scores were classified according to the elasticity: score 1 as high, score 2 as intermediate, and score 3 as low (i.e., a high degree of stiffness). Fine-needle aspiration cytology (FNAC) was performed in all nodules at least two different times. Nodules having two benign FNAC readings that did not change the diameter during a 6-month follow-up period were classified as benign. Patients having thyroid nodules with indeterminate, suspicious, or malignant cytology had total or hemithyroidectomy to remove the nodule and treat the malignancy.
Results: Fifty eight (25%) nodules in 45 (23%) patients were found to be malignant. USE had a limited sensitivity and a positive predictive value in detecting malignant thyroid nodules and was not superior to BUS. USE had almost the same specificity and a negative predictive value as BUS. A power Doppler type-3 pattern was not of sufficient sensitivity to detect malignancies in thyroid nodules.
Conclusions: In contrast to earlier reports, this current study noted a lower sensitivity and specificity of USE for the diagnosis of malignancy in thyroid nodules than previously reported.

Reliability of the diagnostic tests for Cushing’s syndrome performed in a tertiary referral center.

Günes M, Celik O, Kadioglu P.
Division of Endocrinology and Metabolism, Department of Internal Medicine, Cerrahpasa Medical School, University of Istanbul, Istanbul, Turkey.

Abstract
The study aimed to retrospectively evaluate the reliability of the diagnostic and location tests in Cushing’s Syndrome (CS). Eighty-seven patients diagnosed with CS between 1995 and 2007 by Endocrinology Metabolism Department of Cerrahpasa Medical School were included in the study. The control group consisted of 91 patients who presented to the outpatient clinic because of obesity. The diagnostic tests were as follows: 1 mg dexamethasone suppression test (DST), 24-h urinary free cortisol (UFC), midnight cortisol level (MCL), ACTH level and overnight 8 mg DST. The sensitivity and specificity of UFC were 81 and 66 % respectively for the cut-off point of 50 μg/d, whereas they were 64 and 76 % respectively for the cut-off point of 100 μg/d. For the cut-off value of 1.8/μg/dL for MCL and 1 mDST, the sensitivity rates were 100 and 98 %, while the specificity rates were 88 and 33 %, respectively. Among the location tests, the sensitivity and specificity of ACTH under 10 pg/mL for adrenal CS were 92 and 94 % respectively. The sensitivity and specificity of ACTH higher than 30 pg/mL for ACTH-dependent CS were 69 and 100 % respectively. The sensitivity rates of 8 mg DST for 50 and 60 % suppressions were 83 and 79 % respectively, whereas the specificity rates were 75 and 88 % respectively. 1 mg DST (cut-off <1.8 μg/dL and UFC 50 μg/24 h) are appropriate tests for screening CS. Overnight 8 mg DST with 60 % suppression for Cushing’s Disease (CD) and ACTH levels <10 pg/mL for adrenal CS, ACTH levels >30 pg/mL for ACTH dependency were identified as the best tests for the differential diagnosis of the subtypes.
Cyclin A and cyclin B1 overexpression in differentiated thyroid carcinoma.

Nar A, Ozen O, Tutuncu NB, Demirhan B.  
Faculty of Medicine, Department of Endocrinology and Metabolism, Baskent University, 5 sokak No 48, 06490 Bahcelievler, Ankara, Turkey. aslinar@hotmail.com

Abstract  
Approximately 30% of patients with thyroid nodules have indeterminate or suspicious fine-needle aspiration (FNA) biopsy results. These patients usually undergo thyroidectomy because of cancer risk. Our aim was to determine diagnostic value of cyclin A and cyclin B1 immunohistochemistry added to routine cytology and their expression on histological sections. We studied the expression of cyclin A and cyclin B1 in FNA biopsies and resection specimens of 168 indeterminate or suspicious FNA biopsy results retrospectively at an academic hospital using immunohistochemistry. Malignant histopathology consisted 64 of resection specimens (58 papillary, 4 follicular, 1 medullary, and 1 Hürthle cell carcinoma). Cyclin A was overexpressed in 51.5% of malignant cases in contrast to 31.7% of 104 benign pathology specimens (P = 0.025). Cyclin B1 was positive in 39.1% of malignant specimens in contrast to 15.4% of benign cases (P = 0.001). Cyclin A overexpression was not linked to cyclin B1 overexpression. No association was found between overexpression of cyclin A, cyclin B1 and age, thyroiditis, multifocality, tumor size, extra-thyroidal extension, capsule infiltration, lymph node and distant organ metastases and TNM stage in malignant cases. Female patients with thyroid carcinoma overexpressed significantly more cyclin B1 than male patients (P = 0.015). Retrospective analysis of cyclin A and cyclin B1 in FNA biopsies yielded negative results for both benign and malignant cases. In conclusion, cyclin A and cyclin B1 are useful markers in the distinction of benign and malignant thyroid tumors and can increase diagnostic accuracy.

Acromegaly is associated with decreased skin transepidermal water loss and temperature, and increased skin pH and sebum secretion partially reversible after treatment.

Erciyes University Medical School, Department of Dermatology and Venerology, Kayseri, Turkey.

Abstract  
Background: Acromegaly is characterized by an acquired progressive somatic disfigurement, mainly involving the face and extremities, besides many other organ involvement. Wet and oily skin was described in acromegaly patients and it was attributed to hyperhidrosis and increased sebum production but this suggestion has not been evaluated with reliable methods.  
Objective: The aim of this study was to examine the skin parameters of patients with acromegaly using measurements of skin hydration, sebum content, transepidermal water loss, pH and temperature and particularly the effects of 12 months of treatment on these parameters.  
Methods: 52 patients with acromegaly and 24 healthy control subjects were included in this two blinded prospective study. Skin properties were measured on forehead and forearm by Corneometer CM825, Sebumeter SM810, Tewameter TM210 and Phmeter PH900 as non-invasive reliable measuring methods. Serum GH, IGF-1 and all measurements of skin properties on forehead and forearm were repeated at the end of the 3, and 6 months of therapy in 20 cases. Patients were treated with appropriate replacement therapy for deficient pituitary hormones.  
Results: The sebum content and pH of the skin of acromegalic patients were significantly higher and transepidermal water loss and skin temperature were found to be significantly lower in acromegaly patients when compared to the control group both on forehead and forearm. GH and IGF-1 levels were positively correlated with sebum levels and negatively correlated with skin temperature on both forehead and forearm. The sebum levels of the patients were significantly decreased both on forehead and forearm at 3rd and 6th months of treatment.  
Conclusion: The present study demonstrated increased sebum secretion, decreased transepidermal water loss, alkali and hypothermic skin surface in patients with acromegaly by reliable methods for the first time. These data suggest that GH and/or IGF-1 may have a modulatory role on several skin characteristics which can be at least partially reversible with treatment.

Thyroid autoimmunity associated with recurrent aphthous stomatitis.

Ozdemir IY, Calka O, Karadag AS, Akdeniz N, Ozturk M.  
Department of Dermatology, Yuzuncu yil University, Faculty of Medicine, Van, Turkey.

Abstract  
Background: Recurrent aphthous stomatitis (RAS) is an autoimmune disorder characterized by the periodic appearance of aphthous lesions on the oral mucosa. TH1 cytokines plays a key role in the aetiopathogenesis. Autoimmune thyroid disease (ATD) is the most common autoimmune disease and is frequently accompanied by various other autoimmune diseases.  
Objective: To investigate the frequency of ATD which has not been studied in the patients with RAS.  
Methods: Ninety patients and 30 healthy volunteers were included into the study. The serum samples were assayed for thyroid stimulant hormone (TSH), free and total triiodothyronine (FT3, TT3), free and total thyroxine (FT4, TT4), thyroglobulin, anti-thyroid peroxidase antibody (anti-TPO) and anti-thyroglobulin antibody (anti-Tg) levels. Thyroid ultrasonography was performed as well.  
Results: In RAS patients, the FT3, TT3 levels were higher; whereas the FT4 levels were lower that the control group (P < 0.05). The anti-thyroid antibody was positive in 31.11% of the patients with RAS, and in only 10% of the individuals in the control group (P < 0.05). The mean anti-TG level was also higher in the RAS group. Ultrasonography revealed nodules in 28.8% of the patients with RAS and in 16.7% of the individuals in the control group (P < 0.05). The sT4 levels were lower and the TSH, anti-TPO and anti-TG levels were significantly higher in the RAS patients with thyroid nodules than the RAS patients without nodules (P < 0.05).  
Discussion: These results may be related to either the advance age of the patients or the increased duration of the autoimmune activation which may affect the thyroid.  
Conclusions: The frequency of thyroid autoimmune-related problems was higher in patients with RAS. It would be worthy of searching autoimmune thyroid disorders in patients with RAS.
Is there a link between premature ovarian failure and serum concentrations of vitamin D, zinc, and copper?

Kebapcilar AG, Kukaliskizoglou M, Kebapcilar L, Gonen MS, Unlu A, Topcu A, Demirci F, Taner CE.
From the 1Clinic of Obstetrics and Gynecology, Beybekim State Hospital, Konya, Turkey, 2Division of Endocrinology and Metabolism, Department of Internal Medicine, Meram School of Medicine, Konya University, Konya, Turkey, 3Division of Endocrinology and Metabolism, Department of Internal Medicine, Selcuk University, Konya, Turkey, 4Department of Biochemistry, Selcuk School of Medicine, and 5Department of Internal Medicine, Selcuk University, Konya, Turkey, and 6Gazimetre Training and Research Hospital, Izmir, Turkey.

Abstract
Objective: The risk of primary ovarian insufficiency (POI) increases in association with autoimmune diseases. Adequate intake of vitamin D (vit D) and trace elements is required for the immune system to function efficiently. The aim of this study was to evaluate vit D, zinc, and copper levels in women with POI who had given birth to at least one child and in women with normal menstrual cycles.

Methods: This was a cross-sectional, case-control study involving 63 participants divided into two groups: the study group, which is composed of 35 women with POI, and the control group, which is composed of 28 women with normal menstrual cycles. Serum concentrations of zinc, vit D, and copper were determined for each participant.

Results: Women with POI had significantly higher serum copper levels and copper-to-zinc ratio but significantly lower serum vit D and zinc levels when compared with the healthy control group. Serum follicle-stimulating hormone levels were inversely correlated with zinc and vit D levels and positively correlated with the copper-to-zinc ratio and copper levels. Vit D levels were inversely correlated with follicle-stimulating hormone levels, copper-to-zinc ratio, and copper levels and positively correlated with zinc levels.

Conclusions: Most women with POI are deficient in vit D, copper, and vit D seem to correlate with hormonal status in the participants. The present study may generate hypotheses for future studies that will investigate the possible mechanisms behind alterations in trace elements and vit D deficiency in women with POI and whether these changes could be used to screen for the risk of developing POI.

Prevalence, phenotype and cardiometabolic risk of polycystic ovary syndrome under different diagnostic criteria.

Yildiz BO, Bozdag G, Yapici Z, Esinler I, Yarali H.
Endocrinology and Metabolism Unit, Department of Internal Medicine, Hacettepe University School of Medicine, Hacettepe, 06100 Ankara, Turkey.

Abstract
Study question: What is the prevalence, phenotype and metabolic features of polycystic ovary syndrome (PCOS) in the same population according to three different diagnostic criteria?

Summary answer: The prevalence of PCOS under National Institutes of Health (NIH), Rotterdam and Androgen Excess and PCOS (AE-PCOS) Society criteria was 6.1, 19.9 and 15.3%, respectively. PCOS carried a 2-fold increased risk of metabolic syndrome regardless of the diagnostic criteria used.

What is known and what this paper adds: The prevalence rates of PCOS differ depending on the diagnostic criteria used to define the syndrome. The current paper gives hypotheses for future studies that will investigate the possible mechanisms behind alterations in trace elements and vit D deficiency in women with POI and whether these changes could be used to screen for the risk of developing POI.

Examination of the tissue ghrelin expression of rats with diet-induced obesity using radioimmunoassay and immunohistochemical methods.

Aydin S, Sahin I, Ozkan Y, Dag E, Gunay A, Guzu PL, Catak Z, Ozercan MR.
Department of Medical Biochemistry and Clinical Biochemistry (First Hormones Research Group), School of Medicine, Firat University Hospital, Firat University, Elazig 23119, Turkey. saydin1@hotmail.com

Abstract
Currently, obesity is an important health problem in all countries, both developed and developing. Dietary habits and neurohormonal imbalances play a critical role in obesity. Circulating amounts of ghrelin, which is a neurohormonal hormone, decrease with obesity and increase with weight loss. Although it is known that both mRNAs and peptide versions of the ghrelin hormone are expressed in almost all tissues of both humans and animals, it is not known how obesity changes the expression of this hormone in the tissues, with the exception of the gastrointestinal system tissues. Therefore, the objective of the present study is to show how diet-induced obesity in rats changes ghrelin expression in all system tissues, and thus, to shed light on the etiopathology of obesity. The study included 12 male and 12 female 2-month-old Wistar albino species rats. The animals in the control group were fed on standard rat pellet, while those in the experiment group were fed ad libitum on a cafeteria-style diet for 2 months. When their body mass index reached 1 g/cm², diet-induced obese (DIO) rats were sacrificed in a sterile environment after one night fasting. Ghrelin localizations in the tissues were studied immunohistochemically using avidin-biotin-peroxidase complex (ABC) method, while tissue ghrelin amounts were analyzed using radioimmunoassay (RIA) method. When the ghrelin amounts in the urinogenital system (with the exception of kidney tissues), sensory organs, respiratory system, immune system, skeletal muscle system, cardiovascular system, nervous system, and adipose tissue of rats analyzed by RIA method were compared to those in the control group, tissue ghrelin amounts in the DIO group were found lower. Immunohistochemical findings which showed a similar fall in ghrelin concentrations in the tissues were parallel to RIA results. In addition, ghrelin was shown to be synthesized in the cardiovascular system, heart muscle cells, tails of the sperms, hair follicles, lacrimal glands, tongue, and teeth of rats for the first time in this study and ghrelin synthesis in these tissues were found to decrease in obesity. Nutritional obesity is among the most common causes of obesity and the findings we have obtained through diet-induced obesity will contribute to the illumination of the etiopathology of obesity.
Dr. Rümeysa Selvinaz Erol
meslektaşlarımız derneğimize üye olarak kabul edilmiştir.
Üyemizi tebrik eder, başarılarının devamını dileriz.
Dr. Hüseyin Çelik

METABOLİZMA DERNEĞİ BÜLTENİ

Türkiye Bilimsel ve T eknolojik Araştırma Kurumu 2012 Bilim, Özel ve T eşvik Ödülleri ile TÜBİTAK-TWAS T eşvik Üyelerimizden Prof. Dr. Fahrettin Keleştimur ve Prof. Dr. Candeğer Yılmaz Rektörlük atamalarında görevlerine yeniden atanmaktadır. Üyelerimizden Prof. Dr. Fahrettin Keleştimur ve Prof. Dr. Candeğer Yılmaz Rektörlük atamalarında görevlerine devam etmektedirler. Uyelerimizi tebrik eder, başarlarının devamını dileriz.

Prof. Dr. A. Sadi Gündoğdu
Prof. Dr. Mustafa Kemal Balcı

Duyurular


• Erciyes Üniversitesi Tip Fakültesi Öğretim Üyesi Doç. Dr. Fatih Tanrıverdi, Sağlıklı Bilimler alanındaki “Nöroendokrinoloji alanında travmatik beyin hasarının hipofiz bezinin zararlarını ve spora bağlı kafa travmasına bağlı hipofiz yetmezliği” konularındaki uluslararası düzeyde üstün nitelikli çalışmaları nedeniyle TÜBİTAK Teşvik Ödülüne layık bulundu.

• Üyelerimizden Prof. Dr. Fahrettin Keleştimur ve Prof. Dr. Candeğer Yılmaz Rektörlük atamalarında görevlerine yeniden atanarak rektörlik görevlerine devam etmektedirler. Üyelerimizi tebrik eder, başarlarının devamını dileriz.

Yayınlar


Yenilikler


Dr. Rümeysa Selvinaz Erol

Şihi Esen eğitim ve Araştırma Hastanesi, İstanbul

Dr. Hüseyin Çelik

Trakya Üniversitesi Tip Fakültesi, Edirne

Üyemizi tebrik eder, başarlarının devamını dileriz.

Türkçe Endokrinoloji ve Metabolizma Derneği’nce üç ayda bir yayılmasını.
Yayın Türü: Yayın süresi
TEMĐ Adına Sahibi Prof. Dr. A. Sadi Gündoğdu
Sorumlu Yazi İşleri Müdürü Prof. Dr. Mustafa Kemal Balci
Yayın Danışma Kurulu
Prof. Dr. Nuri Çakır, Prof. Dr. Bülent Okan Yıldız, Prof. Dr. Abdurrahman Çömlekçi, Doç. Dr. Serdar Güler, Prof. Dr. Mustafa Sait Gönen

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Grafik Tasarım: İvedik, Ankara • Tel: (312) 395 21 28


Yos현 지시


Grafik Tasarım: İvedik, Ankara • Tel: (312) 395 21 28


Grafik Tasarım: İvedik, Ankara • Tel: (312) 395 21 28


Grafik Tasarım: İvedik, Ankara • Tel: (312) 395 21 28

Yönetim Yeri: Meşrutiyet Cad. Ali Bey. Apt. 29/12, Kızılay 06420 Ankara
Tel: (312) 425 20 72 Faks: (312) 425 20 98
E-posta: president@temd.org.tr

Grafik Tasarım: BAYT Bilimsel Araştırmalar Basın Yayın ve Tanıtım Ltd. Şti.
Tel: (312) 431 30 62 • Faks (312) 431 36 02 • E-posta: info@bayt.com.tr
Ivedik, Ankara • Tel: (312) 395 21 28