TÜRKİYE
ENDOKRİNOLOJİ VE
METABOLİZMA DERNEĞİ
BÜLTENİ

Üç ayda bir online yayımlanır

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KONGRE, KURSLAR VE SEMPOZYUMLAR



43. TÜRKİYE ENDOKRİNOLOJİ VE METABOLİZMA HASTALIKLARI KONGRESİ

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BİLİMSEL SEKRETERYA



TÜRKİYE ENDOKRİNOLOJİ VE METABOLİZMA DERNEĞİ Meşrufiyet Gad. Ali Bey Apt. 29/12 Kızılay / Ankara Tel: 0 312 425 20 72 Faks: 0 312 425 20 98 E-posta: president@temd.org.tr www.temd.org.tr ORGANIZASYON SEKRETERYASI

CONSENSUS KONGRE & ORGANIZASYON Gayrettepe Mah. Yıldız Posta Cad. Şişik Apt. B Blok N4: K tı D.: Zi Gayrettepe / Beşikaş- istanbul Tel : 0.212.280 66 11 pbx / Faks : 0.212.280 66 69 E-mail: temhk@consensustourism.com www.consensustourism.com





5. Mezuniyet Sonrası Eğitim Kursu (ENDOKURS-5), pandemi sonrasında ilk yüz yüze kursumuz olarak 10-14 Kasım 2021 tarihleri arasında Antalya'da başarı ile Sueno Deluxe Otelde gerçekleştirildi. Yaklaşık 370 kayıt ile katılımın en yüksek olduğu ENDOKURS oldu.

Endokrinoloji ve Metabolizma hastalıklarının her alanından deneyimli hocalar tarafından sunulan kursun 5 günlük programında "Kemik Hastalıkları Görüntüleme Okulu" ve "100. Yılında İnsülin Okulu" isimli eğitim programları, 13 Konferans, 13 Panel, 6 Uydu Sempozyumu, 7 Konsey yer aldı. Kursumuza katkıda bulunan 72 Konuşmacı ve 85 Oturum Başkanı hocamıza teşekkür ederiz.

5. Mezuniyet Sonrası Eğitim Kursu'nda 36 adet sözlü ve 48 adet poster olmak üzere toplam 84 bildiri sunuldu, bu sene ilk defa verdiğimiz sözel ve poster bildiri ödüllerimiz için yapılan değerlendirmeler sonucunda sözel bildiri birincilik ödülünü ve poster bildiri ikincilik ödülünü 2 adet bildiri paylaştı ve toplamda 4 sözlü ve 4 poster bildiriye ödül verildi.

Emeği geçen tüm meslektaşlarımıza teşekkür eder, başarılar dileriz.

Prof. Dr. Ayşegül Atmaca Kurs Başkanı

Prof. Dr. Mine Adaş Kurs Bilimsel Sekreteri

Prof. Dr. İbrahim Şahin Kurs Bilimsel Sekreteri



SÖZLÜ BİLDİRİ ÖDÜLLLERİ SÖZLÜ BİLDIRİ BIRINCİLİK ÖDÜLÜ (S-35)

AKROMEGALİ VE DİFERANSİYE KANSERLİ HASTALARIN İZLEM SONUÇLARI

Seda Hanife Oğuz¹, Büşra Fırlatan², Süleyman Nahit Şendur¹ ¹Hacettepe Üniversitesi Tıp Fakültesi, Endokrinoloji ve Metabolizma Hastalıkları Bilim Dalı, Ankara

²Hacettepe Üniversitesi Tıp Fakültesi, İç Hastalıkları Anabilim Dalı, Ankara

SÖZLÜ BILDIRİ BİRİNCİLİK ÖDÜLÜ (S-25)

ERCİYES NÖROENDOKRİN TÜMÖR GRUBU PANKREAS NET VERİLERİ: 20 YILLIK DENEYİM

Emin Samet Saraç¹, Canan Şehit Kara², Ümmühan Abdülrezzak³, Gülten Can Sezgin⁴, Sedat Tarık Fırat⁵, Figen Öztürk⁶, Alper Yurci⁴, Şebnem Gürsoy⁴, Mevlüde İnanç⁵, Metin Özkan⁵, Erdoğan Sözüer⁷, Fahri Bayram²

 ¹Erciyes Üniversitesi Tıp Fakültesi, İç Hastalıkları Anabilim Dalı, Kayseri
 ²Erciyes Üniversitesi Tıp Fakültesi, Endokrinoloji ve Metabolizma Hastalıkları Bilim Dalı, Kayseri

³Erciyes Üniversitesi Tıp Fakültesi, Nükleer Tıp Anabilim Dalı, Kayseri
⁴Erciyes Üniversitesi Tıp Fakültesi, Gastroenteroloji Bilim Dalı, Kayseri
⁵Erciyes Üniversitesi Tıp Fakültesi, Medikal Onkoloji Bilim Dalı, Kayseri
⁶Erciyes Üniversitesi Tıp Fakültesi, Patoloji Anabilim Dalı, Kayseri
⁷Erciyes Üniversitesi Tıp Fakültesi, Genel Cerrahi Anabilim Dalı, Kayseri

SÖZLÜ BİLDİRİ İKİNCİLİK ÖDÜLÜ (S-01)

RF ABLASYON CERRAHİYE UYGUN OLMAYAN PARATİROİD ADENOMLU HASTALARDA BİR TEDAVİ SEÇENEĞİ OLABİLİR Mİ? Abdülkadir Bozbay, İsmail Okan Yıldırım, Bahri Evren, Damla Sebhan Bozbay, İbrahim Şahin

İnönü Üniversitesi Tıp Fakültesi, Endokrinoloji Anabilim Dalı, Malatya

SÖZLÜ BİLDİRİ ÜÇÜNCÜLÜK ÖDÜLÜ (S-04)

LENF NODU METASTAZI YAPAN MİKROPAPİLLER KANSERLERİNİN KLİNİKOPATOLOJİK ÖZELLİKLERİNİN İNCELENMESİ

Murat Çalapkulu¹, Davut Sakız², Muhammed Erkam Sencar¹, Erman Çakal¹

¹Sağlık Bilimleri Üniversitesi, Dışkapı Yıldırım Beyazıt Eğitim ve Araştırma Hastanesi, Endokrinoloji ve Metabolizma Kliniği, Ankara

²Mardin Devlet Hastanesi, Endokrinoloji ve Metabolizma Hastalıkları Kliniği, Mardin

POSTER BİLDİRİ ÖDÜLLERİ POSTER BILDIRİ BIRİNCILİK ÖDÜLÜ (P-31)

ZOR LOKALİZE EDİLEN BİR PARATİROİD ADENOMU OLGUSU; LOKALİZASYONDA HANGİ YÖNTEM DAHA İYİ? Abdülkadir Bozbay, Bahri Evren, Selin Genç, Emine Şener Aydın, İbrahim Sahin

İnönü Üniversitesi Tıp Fakültesi, Endokrinoloji ve Metabolizma Hastalıkları Bilim Dalı, Malatya

POSTER BİLDİRİ İKİNCİLİK ÖDÜLÜ (P-04)

RADYONÜKLİD GÖRÜNTÜLEMELERİNDE YALANCI POZİTİFLİKLER GÖSTEREN BİR EKTOPİK ACTH SENDROMU Özge Telci Çaklılı¹, Sema Çiftçi Doğanşen², Özlem Selçukbiricik¹, Sema Yarman¹

¹İstanbul Üniversitesi, İstanbul Tıp Fakültesi, Endokrinoloji ve Metabolizma Hastalıkları Bilim Dalı. İstanbul

²Bakırköy Sadi Konuk Eğitim ve Araştırma Hastanesi, Endokrinoloji ve Metabolizma Kliniği, İstanbul

POSTER BİLDİRİ İKİNCİLİK ÖDÜLÜ (P-21)

ATİPİK PREZENTASYONLU GAUCHER HASTALIĞI OLGU ÖRNEĞİ Hülya Hacişahinoğulları, Vafa Nasifova Safarova, Özge Telci, Nurdan Gül, Özlem Soyluk Selçukbiricik, Ayşe Kubat Üzüm İstanbul Üniversitesi İstanbul Tip Fakültesi, Endokrinoloji ve Metabolizma Hastalıkları Bilim Dalı, İstanbul

POSTER BİLDİRİ ÜÇÜNCÜLÜK ÖDÜLÜ (P-28)

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Hakan Doğruel¹, Elif Nazlı Serin Ataş¹, Mustafa Aydemir¹, Nusret Yılmaz¹, Şenay Yıldırım², Ramazan Sarı¹ ¹Akdeniz Üniversitesi Tıp Fakültesi, Endokrinoloji ve Metabolizma

Hastalıkları Bilim Dalı, Antalya ²Sağlık Bilimleri Üniversitesi, Antalya Eğitim ve Araştırma Hastanesi, Patoloji Bölümü, Antalya

9 TÜRKİYE TİROİD HASTALIKLARI E-KONGRESİ TAMAMLANDI

9. Türkiye Tiroid Hastalıkları Kongresi, 1-4 Aralık 2021 tarihleri arasında, başkanlığını Prof. Dr. Mustafa Şahin, Bilimsel Sekretaryasını Prof. Dr. Erman Çakal ve Prof. Dr. Mustafa Kulaksızoğlu'nun yürüttüğü kongremiz yaklaşık 2580 meslektaşımızın katılımı ile online olarak gerçekleşti.

4 gün süren ve ilgi ile takip edilen kongre programında, hocalarımızın deneyimlerini aktardığı 12 Konferans, 6 Panel, 1 Vaka Konseyi yer aldı. Kongreye 7 yabancı konuşmacı olmak üzere 82 konuşmacı ve 48 oturum başkanı destek verdi.

35 adet sözlü ve 21 adet e-poster bildiri olmak üzere toplam 56 bildiri sunulan kongrede, 3 sözlü ve 3 e-poster bildiriye ödüller verildi. Emeği geçen tüm meslektaşlarımıza teşekkür eder, başarılar dileriz.

Prof. Dr. Mustafa Şahin Tiroid Çalışma Grubu ve Kongre Bilimsel Kurul Başkanı

Prof. Dr. Erman Çakal Kurs Bilimsel Sekreteri

Prof. Dr. Mustafa Kulaksızoğlu Kurs Bilimsel Sekreteri





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SS-7 TİROİD KAPSÜL EKSPANSİYONU YAPAN NODÜLLERDE MALİGNİTE RİSKİ DEĞERLENDİRMESİ

İsmail Emre Arslan, Sema Hepşen, Erman Çakal Dışkapı Yıldırım Beyazıt Eğitim ve Araştırma Hastanesi, Ankara

SÖZLÜ BİLDİRİ İKİNCİLİK ÖDÜLÜ

SS-8 PAPİLLER BENZERİ NÜKLEUS ÖZELLİKLERİ İÇEREN NONİNVAZİV FOLLİKÜLER TİROİD NEOPLAZMI (NIFTP) TANILI 43 OLGUNUN KLİNİKOPATOLOJİK VE PROGNOSTİK ÖZELLİKLERİNİN DEĞERLENDİRİLMESİ: HACETTEPE DENEYİMİ Banu Ertürk. Gave Güler. Alber Gürlek

Hacettepe Üniversitesi Tıp Fakültesi, Ankara

SÖZLÜ BİLDİRİ ÜÇÜNCÜLÜK ÖDÜLÜ

SS-9 PAPILLER TIROID KARSINOMUNDA SANTRAL LENF NODU METASTAZI ILE ILIŞKİLİ FAKTÖRLERIN DEĞERLENDIRILMESİ Davut Sakız¹, Murat Çalapkulu², Muhammed Erkam Sencar², Erman Çakal²

¹Mardin Eğitim ve Araştırma Hastanesi, Endokrinoloji ve Metabolizma Kliniği, Mardin

²Sağlık Bilimleri Üniversitesi, Dışkapı Yıldırım Beyazıt Eğitim ve Araştırma Hastanesi, Endokrinoloji ve Metabolizma Kliniği, Ankara

POSTER BİLDİRİ ÖDÜLLLERİ POSTER BİLDİRİ BİRİNCİLİK ÖDÜLÜ

EP-4 PRİMER HİPERPARATİROİDİ TANILI HASTALARIMIZIN LOKALİZASYON ÇALIŞMALARI DEĞERLENDİRİLMESİ

Hatice Çalışkan Burgucu, Mustafa Can, Zeliha Yarar, Yusuf Karadeniz, Melia Karaköse, Mustafa Kulaksızoğlu, Feridun Karakurt Necmettin Erbakan Üniversitesi Meram Tip Fakültesi, Endokrinoloji ve Metabolizma Hastalıkları Bilim Dalı, Konya

POSTER BİLDİRİ İKİNCİLİK ÖDÜLÜ

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Serdar Kayıhan¹, M. Erkam Sencar¹, Bekir Uçan¹, Ömer Bayır², Erman Çakal¹

¹Sağlık Bilimleri Üniversitesi, Dışkapı Yıldırım Beyazıt Eğitim ve Araştırma Hastanesi, Endokrinoloji ve Metabolizma Hastalıkları Kliniği, Ankara ²Sağlık Bilimleri Üniversitesi, Dışkapı Yıldırım Beyazıt Eğitim ve Araştırma Hastanesi, Kulak Burun Boğaz Hastalıkları Kliniği, Ankara

POSTER BİLDİRİ ÜÇÜNCÜLÜK ÖDÜLÜ

EP-2 ANTİTİROİD İLAÇ ALLERJİSİ GELİŞEN GRAVES HASTASINDA İLAÇ DESENSİTİZASYONU

Hülya Hacişahinoğulları¹, Ayşe Merve Ok¹, Göktuğ Sarıbeyliler¹, Semra Demir², Nurdan Gül¹, Özlem Soyluk Selçukbiricik¹, Ayşe Kubat Üzüm¹

¹İstanbul Üniversitesi İstanbul Tıp Fakültesi İç Hastalıkları A.D. Endokrinoloji ve Metabolizma Hastalıkları B.D., İstanbul

²İstanbul Üniversitesi İstanbul Tıp Fakültesi İç Hastalıkları A.D. İmmunoloji ve Allerji Hastalıkları B.D., İstanbul

DUYURULAR

"TÜRKİYE'DE İLK KEZ TIP ALANINDAKİ DÖRT UZMANLIK DERNEĞİ DİYABET HASTALIĞI **İLE MÜCADELE İÇİN GÜÇLERİNİ** BİRLEŞTİRDİ!,, (



Türkiye'de 8 milyon insanı etkilediği tahmin edilen Tip 2 diyabet hastalığına yönelik "Diyabette Kardiyovasküler ve Renal Komplikasyonların Önlenmesi, Tanısı ve Tedavisi için Endokrinoloji Kardiyoloji Nefroloji (EnKarNe) Uzlaşı Raporu" yayınlandı. Türkiye Endokrinoloji ve Metabolizma Derneği (TEMD), Türk Kardiyoloji Derneği (TKD), Türk Nefroloji Derneği (TND) ve Türk Hipertansiyon ve Böbrek Hastalıkları Derneği (THBHD) tarafından hazırlanan raporla Tip 2 Diyabet hastalığının multidisipliner bakış açısıyla doğru yönetiminin sağlanması, böylece hastalığın yarattığı sağlık sorunlarının ve topluma getirdiği maliyetlerin önlenmesi amaçlanıyor.

Diyabet tüm dünyada olduğu gibi Türkiye'de de büyük bir sağlık sorunu olmayı sürdürüyor. Ülkemizde halihazırda yaklaşık 8 milyon erişkinde diyabet bulunduğu tahmin ediliyor (1). Tip 2 diyabet görülme sıklığında Avrupa ülkeleri arasında ilk sırada yer alan Türkiye, aynı zamanda Avrupa ülkeleri arasında bu hastalık için en fazla harcama yapan ülke konumundadır (2). Hastalığın yarattığı maliyetin yaklaşık yüzde 75'ini diyabetin komplikasyonları -yani organlara verdiği zararlar- için yapılan harcamalar oluşturuyor (3). Diyabete bağlı ölümlerin ve hastada oluşan zararların en önemli nedenleri arasındaysa diyabet sebebiyle gelişen kalp ve böbrekle ilgili hastalıklar (kardiyak ve renal komplikasyonlar) yer alıyor (4).

Diyabet yönetimine ışık tutmak amacıyla, Türkiye Endokrinoloji ve Metabolizma Derneği (TEMD), Türk Kardiyoloji Derneği (TKD), Türk Nefroloji Derneği (TND) ve Türk Hipertansiyon ve Böbrek Hastalıkları Derneği (THBHD) tarafından "Diyabette Kardiyovasküler ve Renal Komplikasyonların Önlenmesi, Tanısı ve Tedavisi için Endokrinoloji Kardiyoloji Nefroloji (EnKarNe) Uzlaşı Raporu" hazırlandı, Kasım 2021'de TurkJEM dergisinde online erişime açık hale geldi. Rapor, AstraZeneca'nın koşulsuz desteğiyle düzenlenen basın toplantısında kamuoyuyla paylaşıldı.

EnKarNe Raporu, Türkiye'de endokrinoloji, kardiyoloji ve nefroloji disiplinlerinin Tip 2 diyabet hastalığına yönelik olarak ortaklaşa hazırlanan ilk uzlaşı raporu olma özelliğini taşıyor. Dört farklı dernekten dokuz bilim insanı tarafından hazırlanan "EnKarNe Raporu", multidisipliner bakış açısıyla diyabetin etkin bir biçimde yönetilmesi için iyi bakım standartları oluşturmayı amaçlıyor. Bu düzenlemeler tüm hekimler için yol gösterici bir kılavuz niteliğindedir.

İçinde bulunduğumuz yüzyılda kronik ve bulaşıcı olmayan hastalıkların çok önemli sağlık sorunları olduğu ifade edilen raporda, giderek daha fazla kalori alan, daha az enerji harcayan, uyku uyanıklık dengesi bozulan, kimyasal kirleticilere sürekli maruz kalan insanın genetik yapısının, değişen çevre ve yaşam koşullarına yeterli uyum göstermediği tespiti yapılıyor (5). Tüm bu faktörlere bağlı olarak obezite, hipertansiyon, dislipidemi ve bu hastalıkların çoğunlukla bir arada bulunduğu Tip 2 diyabet sıklığı dünyada ve ülkemizde giderek artıyor[6].

Raporda Tip 2 diyabet hastalığına ilişkin önemli bilgiler şöyle vurgulanıyor:

- Yapılan çalışmalar hem ülkemizde (TURDEP-2 Çalışması) hem de dünya
 - da, her iki diyabetliden birinin henüz tanı almadığını gösteriyor (7).

- Diyabetli bireylerde diğer organları etkileyen hasarların gelismesini önlemek için kan şekerini kontrol altında tutmak son derece önemli (8).
- Sadece kan şekeri kontrolü ile diyabetin kalp ve böbrek ile ilgili sonuçlarını bütünüyle önlemek mümkün olmuyor (9).
- Diyabetli bireylerde en sık görülen kalp-damar hastalıkları; koroner arter hastalığı, periferik arter hastalığı, inme ve sistolik/diyastolik kalp yetersizliği olarak sıralanıyor (10).
- Kalp sebepli ölümlerin nedeni olarak öncelikle kalp damar tıkanıklıkları düşünülse de olguların önemli bir kısmında damar tıkanıklığı değil, kalp yetersizliği gibi kalbin fonksiyon bozukluklarıyla seyreden hastalıklar ölüme neden oluvor (11).
- Diyabet, kronik böbrek hastalığının (KBH) en sık görülen nedeni olarak tanımlanıyor. Diyabetli bireylerde KBH riski diyabetli olmayanlara kıyasla en az iki kat artmış bulunuyor ve hastaların yaklaşık yüzde 30-40'ında böbrek hastalığı gelişiyor (12).
- Türkiye'de 2020 yılı Böbrek kayıt sistemi raporuna göre, Türkiye'de 2020 yılında hemodiyalize yeni başlayan hastaların 6.6'sının diyabeti mevcuttur (13).

Diyabette Kardiyovasküler ve Renal Komplikasyonların Önlenmesi, Tanısı ve Tedavisi için Endokrinoloji Kardiyoloji Nefroloji (EnKarNe) Raporu'nda, diyabetli bireylerin hastalık ve tedavi yönetiminde uyulması gereken kurallar şöyle sıralanıyor:

- 1. Diyabetli bireyde eşlik eden hastalık ve risk faktörlerinin tespiti
- Eşlik eden hastalıkların taranması 2.
- Kardiyoloji ve Nefroloji'ye konsültasyonu istenilmesi gereken durumlar 3.
- 4. Tedavi hedeflerinin belirlenmesi ve yaşam biçimi düzenlemeleri

5. Akılcı tıbbi tedavi

Raporun tamamına erişmek için:

http://www.Turkjem.Org/uploads/pdf/176483724163736.Pdf

- Satman i, et al. Eur j epidemiol. 2013;28(2):169-180.
- International diabetes federation (idf) diabetes atlas 9. Edition 2019, isbn: 978-2-930229-87-4 2. 3.
- Malhan s, et al. Turkish j endocrinol metabolism. 2014;18(2):39-43 4.
- Braunwald e. Prog cardiovasc dis. 2019;62(4):298-302, Matheus as de m, et al. Int j hypertens. 2013;2013:653789 5.
- Satman i, et al. Eur j epidemiol. 2013;28(2):169-180. Budnik lt, et al. J occup med toxicol. 2018;13(1):6, Satman i, et al. Eur j epidemiol. 2013;28(2):169-6. 180
- 7. Satman i, et al. Eur j epidemiol. 2013;28(2):169-180, Saeedi p, et al. Diabetes res clin pr. 2019;157:107843
- 8. The diabetes control and complications trial research group new engl j medicine. 1993;329(14):977-986
- 9. The accord study group. New engl j medicine. 2011;364(9):818-828, The advance collaborative group. New engl j medicine. 2008;358(24):2560-2572.
- Schmidt am. Arteriosclerosis thrombosis vasc biology. 2019;39(4):558-568 Glovaci d, et al. Curr cardiol rep. 2019;21(4):21 10.
- 11.
- 12. Koye dn, et al. Adv chronic kidney d. 2018;25(2):121-132
- Türkiye'de nefroloji, diyaliz ve transplantasyon registry 2020, isbn 978-605 62465-00 13.

20 EKİM DÜNYA OSTEOPOROZ GÜNÜ BASIN BİLDİRİSİ

emiğin kütlesinde azalma, mikro yapısında bozukluk ve gücünde azalma sonucu gelişen osteoporoz, kırık riskinde artışa yol açan ve en sık görülen metabolik kemik hastalığıdır.

Nüfusun giderek yaşlanması nedeniyle daha çok karşılaşılmakta olan osteoporoz, toplumlara hem ekonomik hem de sosyal bir yük getirmektedir. Menopoz sonrası dönemde yaygın olarak görülen osteoporoz, sadece kadınların hastalığı olmayıp, erkekle-

ri de etkilemektedir. Ülkemizde yapılan çalışmalarda da 50 yaş üzerindeki her 4 kişiden birinde osteoporoz bulunduğu belirlenmiştir. Elli yaşın üzerindeki her 3 kadından birinin ve her 5 erkekten birinin hayatının bir döneminde kırık yaşayacağı öngörülmekte, tüm dünyada her üç saniyede bir kırık oluştuğu ve yılda 9 milyon kırık vakası olduğu tahmin edilmektedir.

Osteoporoza bağlı kırıklar genellikle hafif bir travmayla veya kendiliğinden ortaya çıkmakta, omurga kırıkları boy kısalığı ve kamburluğa, kalça kırıkları ise sakatlık ve ölüm riskinde artışa neden olabilmektedir. Kırık nedeniyle başkalarına bağımlı hale gelen bireylerde, sosyal etkileşim azalmakta ve aktiviteleri kısıtlanan bireylerde yaşam kalitesi bozulmaktadır. Duygusal olarak da etkilenen bireylerde sonunda psikolojik problemler gelişebilmektedir.

Osteoporoz sinsi ilerlemekte ve sanılanın aksine her zaman ağrı ile seyretmemektedir. Omurga kırıklarının sadece 1/3' ine klinik olarak tanı konulabilmekte, omurga kırığı olan her 5 kadından 1'inin bir yıl içinde bir kez daha kırık yaşayacağı

ön görülmektedir. Kalça kırığından sonra ise hastaların -24'ü ilk yıl içinde kaybedilmektedir. Yine, önceki bir kırığın, herhangi bir kırık riskinde yüzde seksenaltı artışla ilişkili olduğu saptanmıştır. Osteoporoza bağlı en az bir kırık yaşamış olan bireylerin yüzde seksenine osteoporoz tanısı konulmadığı ve osteoporoz tedavisi almadığı anlaşılmıştır. Görüldüğü gibi ciddi bir hastalık olan osteoporozdan korunmak için, yaşam boyu egzersiz, bol kalsiyumlu gıda (başlıca süt ürünleri, yeşil yapraklı sebzeler ve yağlı tohumlar) tüketimi ile sigara, alkol ve aşırı kafeinden uzak yaşam tarzı büyük önem taşımaktadır.

Erken teşhis ve zamanında tedavi ancak tarama ile mümkün olmakta ve bunun için kolay ve güvenilir bir yöntem olan kemik mineral yoğunluğu ölçümlerinden yararlanılmaktadır.



Osteoporoz için kimler taranmalıdır?

Osteoporoz için, 65 yaş üstü bütün kadınlar ve 70 yaş üstü bütün erkekler kemik mineral yoğunluğu ölçümü ile taranmalı, sonuç normal bulunursa ölçümler birkaç yılda bir tekrar edilmelidir. Altmış beş yaşın altında olup menopozda olan kadınlar ile 50-70 yaş arası erkeklerde ise kırık için aşağıdaki risk faktörlerinden herhangi biri varsa yine tarama yapılmalıdır:

- Boy yüksekliğinden az bir mesafeden düşmekle kırık gelişmesi,
- Üç aydan uzun süre ≥5 mg/gün prednisolon ya da eşdeğeri glukokortikoid (kortizon tedavisi) kullanımı,
- Romatizmal bir hastalığa sahip olmak,
- Sigara ve aşırı alkol tüketimi
- Boyda 4 cm'den fazla kısalma,
- Düşük vücut ağırlığı,
- Geç adet görme,
- 45 yaşından erken menopoza girme,
- Ailede kalça kırığı bulunması

Osteoporoz önlenebilir ve tedavi edilebilir bir hastalıktır. Riskiniz varsa harekete geçiniz, tarama ve gerekiyorsa tedavi için geç kalmayınız !!!

14 KASIM DÜNYA DİYABET GÜNÜ BASIN BİLDİRİSİ

iyabet tüm dünyada ve ülkemizde önemli bir sağlık sorunudur. Dünya Sağlık Örgütü (WHO) ve Uluslararası Diyabet Federasyonu (IDF), diyabet hastalığına dikkat çekmek amacı ile, insülini bulan Fredrick Banting'in doğum gününe atfen, 14 Kasım tarihini "Dünya Diyabet Günü" olarak belirlemişlerdir. Birleşmiş Milletler Genel Kurulu tarafından, 2007 yılında 14 Kasım resmi olarak "Dünya Diyabet Günü" olarak tanınmış, aynı yıl "mavi halka" diyabetin sembolü olarak belirlenmiştir. Bu sembol, giderek artan diyabetli topluluğunu simgelemektedir. Pandemi nedeni ile son iki yıldır aksamalar olsa da, 14 Kasım'da kampanyalar, aktiviteler, kan şekeri taramaları ve toplantılar yapılmakta, diyabet farkındalığının artması için gayret gösterilmektedir.

Diyabet pandemisi hız kesmedi

Pandemi kelimesi çok geniş insan topluluklarına yayılan salgın hastalıkları ifade etmek için kullanılır. Bulaşıcı bir hastalık olmamakla birlikte, diyabet için "Diyabet Pandemisi" ifadesi son 20 yıldır kullanılır hale gelmiştir. Çünkü diyabet tüm dünyada oldukça geniş kitleleri etkilemiş durumdadır ve giderek yaygınlaşmaktadır. Aşırı beslenme, hareketsizlik, dünya nüfusunun yaşlanması diyabetli nüfusun artmasının ana nedenleridir.

Aralık ayında tam metni yayınlanacak olan IDF (International Diabetes Federation-Uluslararası Diyabet Federasyonu) 2021 atlasına ilişkin ön bilgilendirmeler endişe vericidir. IDF atlasının 2019 yılındaki tahminlerinde göre 2030 yılı için beklenen 578 milyon diyabetli sayısına neredeyse ulaşılmış durumdadır. Zira, 2021 atlasında günümüzde dünyada 537 milyon diyabetlinin yaşadığı bildirilmekte, 2030 yılında bu sayının 643 milyona çıkacağı tahmin edilmektedir. Daha önceki ileriye dönük tahminlerde de benzer durum yaşanmış, hasta sayılarına ilişkin olumsuz tahminler beklendiğinden de erken ortaya çıkmıştır. Dolayısıyla uyarılara, bilgilendirme ve önleme kampanyalarına rağmen artış devam etmektedir.

Türkiye, Avrupa ülkeleri arasında diyabet oranının en yüksek olduğu ülkedir. Böyle giderse, 2045 yılında dünyada en büyük diyabetli nüfusun olduğu ilk 10 ülke arasına gireceği ve bu hastaların yarısını 65 yaş üzeri bireylerin oluşturacağı öngörülmektedir. Bu durum, bireyin kronik bir hastalıkla mücadelede zorluklar yaşamasının ötesinde, topluma önemli bir sosyoekonomik yük getirecektir.

Pandemi sürecinde diyabet

Diyabetli olmanın hastalığın bulaşması yönünden ek risk getirmediği bilinmektedir. Sağlık Bakanlığı verilerinin sunulduğu TurCoviDia çalışmasında hastaneye yatırılarak izlenen 18500 Covid-19 hastasının verilerine bakıldığında Tip 2 diyabetli hastalarda hastanede kalış süresinin diyabetli olmayanlara kıyasla daha uzun olduğu, ölüm ve yoğun bakıma alınma ihtimalinin ise arttığı saptanmıştır. Bu bilgi, dünya verileri ile aynı doğrultudadır. Dolayısıyla, diyabetli hastalara hastalıktan korunma için başkalarından farklı bir yöntem önerilmemektedir, ama mevcut kurallara hassasiyetle uymaları şarttır. Ülkemizde bazı merkezlerden yayınlanan bölgesel veriler, pandemi sürecinde birçok hastada kan şekeri kontrolünün bozulduğunu bildirmektedir. Meslektaşlarımızın polikliniklerdeki gözlemleri de bu doğrultudadır. Hastalarımızın sadece Covid-19 değil, grip ve zatürre aşılarını da yaptırmaları ve düzenli diyabet takiplerine devam etmeleri önemli ve gereklidir.

İnsülinin 100. Yılı

İnsülin günümüzden 100 yıl önce, 1921 yılında keşfedilmiştir. 1922 yılının başında ilk uygulama Leonard Thompson isimli bir kişiye yapılmış, o zamandan beri milyonlarca diyabetli hastanın yaşamı bu sayede kurtarılmıştır. İnsülin, pankreası insülin üretemeyen, çoğunluğu çocukluk çağında olan Tip 1 diyabetlilerin yaşamının devamı için vazgeçilemez bir tedavidir. İlaç teknolojisindeki gelişmelere rağmen birçok erişkin tip diyabetlide de hap tedavileri yetersiz kalmakta, insülin tedavisine ihtiyaç duyulmaktadır. İnsülinin önemi 2021 senesi boyunca yapılan ulusal ve uluslararası tıbbi toplantılarla vurgulanmıştır.

Dünya Diyabet Günü 2021 sloganı; "Diyabet Bakımına Erişim: Şimdi Değilse Ne Zaman?"

Dünyada her dört diyabetliden üçü düşük-orta gelir düzeyindeki ülkelerde yaşamaktadır. Diyabetli bireylerin ilaçlara, şeker ölçüm cihazı, sürekli glukoz ölçüm sistemleri, insülin pompası gibi diyabet teknoloji ürünlerine, hastalığın takibi ve tedavi yönetimi gibi konularda uzmanlaşmış sağlık profesyonellerinin desteğine ihtiyacı vardır. Ancak, dünyada milyonlarca kişi insülin gibi temel tedavi haklarına bile ulaşamamaktadır. Bu yıl dünya diyabet günü teması olarak "diyabet bakımına yeterli erişim sağlanması" için tüm dünya uyarılmakta ve gerek toplumdaki bireyler gerekse ülke yönetimleri hassasiyete davet edilmektedir.

Ülkemizde insülin, diğer diyabet ilaçları, hastalığın temel takip ve tedavisi gibi konularda büyük bir sorun bulunmamaktadır. Bununla birlikte bazı diyabet ilaçları ve sürekli şeker ölçümü yaparak kayıt alan sistemler SGK ödeme kapsamında değildir. İnsülin pompalarına erişim kısıtlıdır, ödemeleri kısmen yapılmaktadır. Bu tedavilerin seçilmiş hasta gruplarında daha ulaşılabilir olmasında fayda görüyoruz. Ayrıca, hastaların deneyimli diyabet ekiplerine ve diyabete eşlik eden sağlık sorunlarını izleyen sağlık profesyonellerine ulaşabilmesi için koşulların iyileştirilmesine ihtiyaç vardır. Mevcut sistemde kronik hastalığı olan bireylerin muayenesi için ayırılabilen süre yetersizdir.

Sürekli Glukoz İzlem Sistemleri (Sensörler)

Sürekli Glukoz İzlem Sistemleri hastanın vücuduna yerleştirdiği bir cihaz sayesinde 24 saat boyunca cilt altı dokudaki şekeri ölçer ve kayıt altına alırlar. Böylece, kişi parmak delmeye gerek kalmadan, sürekli olarak şekerini takip edebilir ve hatta yakınlarına, kendisini izleyen sağlık mensuplarına bilgi iletilmesini sağlayabilir. Cihazın ekranındaki yukarı veya aşağı yönlü oklar sayesinde hızlı düşüş ve yükselişlerden önceden haberdar olunabilir, düşük şeker durumunda cihaz alarmla hastayı uyarır. Tüm bu fonksiyonların daha iyi şeker kontrolü sağlama, hipoglisemi (aşırı şeker düşüklüğü) durumunda tedbir almayı hızlandırma, kişinin yaşam kalitesini artırma gibi kısa dönemdeki faydaları kanıtlanmıştır. Yaklaşık 10 yıldır kullanılan ve giderek yaygınlaşan bu cihazların diyabete ilişkin organ hasarları gibi geç dönemdeki komplikasyonları önlemede de faydalı olacağını öngörmekteyiz. Ancak, Sürekli Glukoz İzlem Sistemleri'nin maliyeti gerek ülkemizde gerekse dünyada birçok diyabetli hasta için yüksektir. Birçok ülkede, sağlıkla ilgili ödeme sistemleri, çocukluk çağından başlayarak sensörlerin maliyetini kısmen de olsa karşılamaya başlamıştır. Ülkemizde de çocukluk çağındaki Tip 1 diyabetliler ve gebe Tip 1 diyabetlilerin sensörlerinin SGK tarafından karşılanması veya geri ödeme kapsamına alınmasının hastalarımız için çok önemli ve gerekli olduğu kanısındayız.





Derneğimizin sosyal medya hesaplarına LinkedIn hesabı da eklenmiştir.

Sosyal medya hesaplarımız sayesinde derneğimizi daha yakından takip edebilir, gerçekleşen eğitim programlarından hızlıca haberdar olabilirsiniz. LinkedIn hesabımıza ve diğer sosyal medya hesaplarımıza aşağıdaki linklerden ulaşabilirsiniz.

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- 11 14 Haziran 2022
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Lyon ENEA 2022 Congress - 20th Congress of the European Neuroendocrine Association, Lyon, Cité Internationale – Centre de Congrès, France https://eneassoc.org/

- 10-13 Eylül 2022
- 44th Annual Meeting of the European Thyroid Association (ETA), Brussels, Belgium www.eurothyroid.com
- 19-23 Eylül 2022 58th Annual Meeting - European Association for the Study of the Diabetes, Stockholm, Sweden https://www.easd.org/annual-meeting/easd-2022.html
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ÜYELERİMİZDEN LİTERATÜR SEÇMELERİ

THE COMPATIBILITY OF THE TREATMENT MODALITIES TO THE RECOMMENDATIONS OF THE KIDNEY DISEASE OUTCOMES QUALITY INITIATIVE GUIDELINE IN CHRONIC KIDNEY DISEASE PATIENTS WITH DIABETES

Zelal Adibelli¹, Cevdet Duran²

Iran J Public Health. 2021 Jun;50(6):1206-1212. doi: 10.18502/ijph.v50i6.6419. PMID: 34540741 PMCID: PMC8410973 DOI: 10.18502/ijph.v50i6.6419

Background: Diabetes mellitus (DM) and chronic kidney disease (CKD) are global growing health problems. Since DM is the major cause for CKD etiology, its development can be prevented with simple measures, like achievements of glycemic, lipid and blood pressure targets. This study aimed to evaluate whether the treatment goals for CKD patients with DM are achieved under the Kidney Disease Outcomes Quality Initiative (KDOQI) guideline.

Methods: Overall, 160 CKD patients with DM were enrolled in the study performed in Usak, Turkey from Jan 2016 to Jan 2018. Compatibility with treatment goals defined in KDOQI 2012 guideline for HbA1c levels, hypertension and dyslipidemia were evaluated retrospectively.

Results: Of 160 CKD patients [15 (9.4%) in stage 3a, 53 (33.1%) stage 3b, 51 (31.9%) stage 4 and 41 (25.6%) stage 5], 23 patients in stage 5 were on hemodialysis. Total compliance rate to hyperglycemia treatment was 94 of 160 patients (58.8%). Compatibility rates between different stages of CKD were similar. Hypertension was detected only in 134 patients. Sixty-six (49.3%) patients were compatible with the treatment goals, and as the CKD stages progressed, the rate of patients achieving hypertension treatment goals was declined (P=0.001). One-hundred and thirty-seven patients were not on hemodialysis and fifty-four (39.9%) of 137 patients achieved dyslipidemia goal. There was no difference between different stages of CKD.

Conclusion: Under KDOQI 2012 guideline, treatment goal for hyperglycemia was better achieved than the treatment goals for hypertension and dyslipidemia. In CKD patients with DM the physicians should be also focused on the treatment of hypertension and dyslipidemia.

THE STIMULATORY EFFECTS OF GLUCAGON ON CORTISOL AND GH SECRETION OCCUR INDEPENDENTLY FROM FGF-21

Ilyas Akkar¹, Zuleyha Karaca², Serpil Taheri³, Kursad Unluhizarci¹, Aysa Hacioglu¹, Fahrettin Kelestimur⁴

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Purpose: Glucagon stimulation test (GST) is used to assess the hypothalamo-pituitary-adrenal (HPA) and growth hormone (GH) axes with an incompletely defined mechanism. We aimed to assess if glucagon acted through fibroblast growth factor-21 (FGF-21) to stimulate cortisol and GH secretion. The secondary outcome was to determine the relationship of FGF-21 with variable GH responses to GST in obesity.

Methods: A total of 26 healthy participants; 11 obese (body mass index (BMI) $> 30 \text{ kg/m}^2$) and 15 leans (BMI $< 25 \text{ kg/m}^2$) were included. Basal pituitary and target hormone levels were measured and GST was performed. During GST, glucose, insulin, cortisol, GH, and FGF-21 responses were measured.

Results: The mean age of the participants was 26.3 ± 3.6 years. Glucagon resulted in significant increases in FGF-21, glucose, insulin, cortisol, and GH levels. The levels of basal cortisol, GH, FGF-21, and IGF-1 were similar in the two groups. The peak GH and area under the curve (AUC) (GH) responses to GST in the obese group were lower than those of the normal-weight group with a different pattern of response. There were no differences between the groups in terms of peak cortisol, AUC_(cortisol), peak insulin, AUC_(insulin), peak FGF-21, and AUC_(FGF21). Obesity was associated with significantly increased glucose and insulin responses and slightly decreased FGF-21 response to glucagon.

Conclusion: Obesity was associated with blunted and delayed GH, but preserved cortisol responses to GST. This is the first study showing that glucagon stimulates the HPA and GH axis independently from FGF-21. The delayed GH response to GST in obesity does not seem to be related to FGF-21.

DEVELOPMENT OF PANCREATIC INJURIES IN THE COURSE OF COVID-19

C Akkus¹, H Yilmaz², S Mizrak³, Z Adibelli⁴, O Akdas⁵, C Duran⁶ Acta Gastroenterol Belg. Oct-Dec 2020;83(4):585-592. PMID: 33321015

Background and study aims: To investigate the clinical and laboratory characteristics of the cases with high lipase levels in the course of COVID-19.

Patients and methods: Hospital records of all cases, where lipase levels were measured, and the reverse transcriptase-polymerase chain reaction test due to SARS-CoV-2 was found positive, were retrospectively investigated. Of 127 COVID-19 patients tested for lipase, 20 (15.7%) had serum lipase levels above the upper laboratory limit. The patient group with the "high lipase level" was created from these subjects, and the rest constituted the "control" group.

Results: While body mass index (BMI) levels were higher in the high lipase group, (p=0.014), the number of those with pre-existing diabetes mellitus (DM) was also found higher in the high lipase group than the controls (p=0.002). The history of DM was detected to increase the risk of developing high lipase level 4.63 times higher. Only two patients were diagnosed with acute pancreatitis (AP). While oxygen saturations on admission (p=0.019) and discharge (p=0.011) were lower in the high lipase group than the controls, amylase (p<0.001), C-reactive protein (CRP) (p=0.002) and D-dimer (p=0.004) levels were found higher. In addition, more patients required the treatment in intensive care unit in the high lipase group, compared to the controls (p=0.027). Accordingly, time of hospital stay became also prolonged (p=0.003).

Conclusions: Pancreatic injuries or even AP may develop during SARS-CoV-2 infection, especially in those with preexisting DM. Monitoring of pancreatic enzymes is important in COVID-19 patients, especially with pre-existing DM.

POSSIBLE ROLE OF THE RECEPTOR OF ADVANCED GLYCATION END PRODUCTS (RAGE) IN THE CLINICAL COURSE OF PROSTATE NEOPLASIA IN PATIENTS WITH AND WITHOUT TYPE 2 DIABETES MELLITUS

Gamze Akkus¹, Volkan Izol², Fesih Ok², Mehtap Evran¹, Merve Inceman³, Seyda Erdogan³, Halil Mahir Kaplan⁴, Murat Sert¹, Tamer Tetiker¹ Int J Clin Pract. 2021 Mar;75(3):e13723. doi: 10.1111/ijcp.13723. Epub 2020 Oct 13. PMID: 32957168 DOI: 10.1111/ijcp.13723

Aim: The expression of the cognate receptor of advanced glycation end products (RAGE) in malignant tissues of patients with type 2 diabetes has been suggested as a co-factor determining the clinical course and prognosis. We aimed to investigate the relationship between RAGE expression and clinicopathological features of prostate neoplasia.

Methods: Tissue samples of 197 patients, 64 (24 patients with type 2 diabetes and 40 controls) with benign prostate hyperplasia (BPH) and 133 (71 patients with type 2 diabetes and 62 controls) with localised or metastatic prostate cancer (LPCa/MetPCa) were included in the study. The expression of RAGE in prostate specimens was studied immunohistochemically.

RAGE scores were determined according to the extent of immunoreactivity and staining intensity.

Results: RAGE expression in BPH group (patients with type 2 diabetes and controls) was negative. Patients with both LPCa and MetPCa had significantly higher scores than those with BPH (P <.001). The mean RAGE scores of patients with type 2 diabetes LPCa and MetPCa were 4.71 ± 3.14 and 4.97 ± 3.69 . The mean scores of control LPCa and MetPCa were 1.52 ± 1.87 and 1.69 ± 1.58 , respectively. The scores of patients with type 2 diabetes LPCa and MetPCa and MetPCa were significantly higher than those of control LPCa and MetPCa (P = .01 and P <.001, respectively).

Conclusion: We found higher RAGE expression levels in malignant prostate neoplasia than in BPH. As expected, patients with diabetes had higher scores than control patients. Disease progression and survival parameters were worse in patients with high RAGE levels. RAGE expression may be a useful biomarker for the diagnosis and prognosis of prostate cancer.

COMPARISON OF 24-HOUR ELECTROCARDIOGRAM PARAMETERS IN PATIENTS WITH GRAVES' DISEASE BEFORE AND AFTER ANTI-THYROID THERAPY

Gamze Akkuş¹, Yeliz Sökmen², Mehmet Yılmaz³, Özkan Bekler⁴, Oğuz Akkuş⁴ Endocr Metab Immune Disord Drug Targets. 2021;21(1):183-191. doi: 10.2174/187153032 0666200729145100. PMID: 32727336 DOI: 10.2174/1871530320666200729145100

Background: We aimed prospectively to investigate the laboratory and electrocardiographic parameters (heart rate, QRS, QT, QTc, Tpe, Tpe/QTc, and arrhythmia prevalence) in patients with Graves' disease before and after antithyroid therapy.

Methods: Seventy-one patients (48 female, and 23 male), of age between 18-50 years (mean \pm SD: 36.48 \pm 12.20) with GD were included in the study. Patients were treated with antithyroid therapy (thioamides and/or surgical therapy) to maintain euthyroid status. Patients were examined in terms of electrocardiographic parameters before and after the treatment.

Results: Mean TSH, free thyroxin (fT4), and tri-iodothyrionine (fT₃) levels of all patients were 0.005 ± 0.21 , 3.27 ± 1.81 , 11.42±7.44, respectively. While 9 patients (group 2) underwent surgical therapy, had suspicious malignant nodule or large goiter, and unresponsiveness to medical treatment; the other patients (n=62, group 1) were treated with medical therapy. Patients with surgical therapy had more increased serum fT4 (p=0.045), anti-thyroglobulin value (p=0.018) and more severe graves orbitopathy (n=0.051) before treatment when compared to a medical therapy group. Baseline Tpe duration and baseline Tpe/QTc ratio and frequency of supraventricular ectopic beats were found to be significantly higher in group 2 when compared to group 1 (p=0.00, p=0.005). Otherwise, the baseline mean heart rate, QRS duration, QTc values of both groups were similar. Although the patients came at their euthyroid status, group 2 patients still suffered from more sustained supraventricular ectopics beats than group 1.

Conclusion: Distinct from the medical treatment group, surgical treatment group with euthyroidism for at least 3 months still suffered from an arrhythmia (Tpe, Tpe/QTc, supraventricular and ventricular ectopic beats).

WHICH PREDICTORS COULD EFFECT ON REMISSION OF TYPE 2 DIABETES MELLITUS AFTER THE METABOLIC SURGERY: A GENERAL PERSPECTIVE OF CURRENT STUDIES?

Gamze Akkus¹, Tamer Tetiker¹

World J Diabetes. 2021 Aug 15;12(8):1312-1324. doi: 10.4239/wjd.v12.i8.1312. PMID: 34512896 PMCID: PMC8394232 DOI: 10.4239/wjd.v12.i8.1312

Background: The alarming rise in the worldwide prevalence of obesity is paralleled by an increasing burden of type 2 diabetes mellitus (T2DM). Metabolic surgery is the most effective means of obtaining substantial and durable weight loss in individual obese patients with T2DM. There are randomized trials that justify the inclusion of metabolic surgery into the treatment algorithm for patients with T2DM, but remission rates of T2DM after metabolic surgery can display great variability.

Aim: To discuss the most commonly used surgical options including vertical sleeve gastrectomy, adjustable gastric banding, Roux-en-Y gastric bypass, and biliopancreatic diversion with duodenal switch.

Methods: We also report from observational and randomized controlled studies on rate of remission of T2DM after the surgical procedures.

Results: In light of the recent findings, metabolic surgery is a safe and effective treatment option for obese patient with T2DM, but further studies are needed to clarify better the rate of diabetes remission.

Conclusion: In light of the recent findings, metabolic surgery is a safe and effective treatment option for obese patients with T2DM, but further studies are needed to clarify better the rate of diabetes remission.

THE ROLE OF GLP-1 RECEPTOR AGONISTS DURING COVID-19 PANDEMIA: A HYPOTHETICAL MOLECULAR MECHANISM

Yajnavalka Banerjee¹², Anca Pantea Stoian³, José Silva-Nunes⁴⁵⁶, Alper Sonmez⁷, Ali A Rizvi⁸⁹, Andrej Janez¹⁰, Manfredi Rizzo³⁹¹¹

Expert Opin Drug Saf. 2021 Nov;20(11):1309–1315. doi: 10.1080/14740338.2021.1970744. Epub 2021 Aug 25. PMID: 34424130 PMCID: PMC8425441 DOI: 10.1080/14740338.2021.1970744

Introduction: A number of anti-diabetic treatments have been favored during the continuing spread of the current SARS-CoV-2 pandemic. Glucagon like peptide-1 receptor agonists (GLP1-RAs) are a group of antidiabetic drugs, the glucose reducing effect of which is founded on augmenting glucosedependent insulin secretion with concomitant reduction of glucagon secretion and delayed gastric emptying. Apart from their glucose lowering effects, GLP1-RAs also exert a plethora of pleiotropic activities in the form of anti-inflammatory, antithrombotic and anti-obesogenic properties, with beneficial cardiovascular and renal impact. All these make this class of drugs a preferred option for managing patients with type 2 diabetes (T2D), and potentially helpful in those with SARS-CoV2 infection. **Areas covered:** In the present article we propose a hypothetical molecular mechanism by which GLP1-RAs may interact with SARS-CoV-2 activity.

Expert opinion: The beneficial properties of GLP1-RAs may be of specific importance during COVID-19 infection for the most fragile patients with chronic comorbid conditions such as T2D, and those at higher cardiovascular and renal disease risk. Yet, further studies are needed to confirm our hypothesis and preliminary findings available in the literature.

EFFECTS OF CHRONIC SUPPRESSION OR OVERSUPPRESSION OF THYROID-STIMULATING HORMONE ON PSYCHOLOGICAL SYMPTOMS AND SLEEP QUALITY IN PATIENTS WITH DIFFERENTIATED THYROID CANCER

Seher Çetinkaya Altuntaş¹, Çiçek Hocaoğlu² Horm Metab Res. 2021 Oct;53(10):683-691. doi: 10.1055/a-1639-1024. Epub 2021 Oct 4. PMID: 34607367 DOI: 10.1055/a-1639-1024

In differentiated thyroid cancer (DTC), the standard treatment includes total thyroidectomy and lifetime levothyroxine (LT4) replacement. However, long-term exogenous LT4 has become controversial due to the adverse effects of oversuppression. The study included 191 patients (aged 18-76 years) with a prospective diagnosis of non-metastatic DTC and 79 healthy individuals. The patients with DTC were stratified into three groups according to their TSH levels: suppressed thyrotropin if TSH was below 0.1 μ IU/ml, mildly suppressed thyrotropin if TSH was between 0.11 and 0.49 μ IU/ml, and low-normal thyrotropin if THS was between 0.5 and 2 μ IU/ml. The Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Anxiety Sensitivity Index (ASI), Short Symptom Inventory (SSI), and Pittsburgh Sleep Quality Index (PSQI) were administered to all participants. It was found that the BDI, BAI, SSI and PSQI scores were worse in patients with DTC (p=0.024, p=0.014, p=0.012, and p=0.001, respectively).According to the TSH levels, the mean ASI was found to be higher in the suppressed and mildly suppressed thyrotropin groups (19±14.4 vs. 10.6±11.1; 16.4±14.9 vs. 10.6±11.1, p=0.024, respectively), the mean SSI was found higher in the suppressed group (61.0 ± 55.5 vs. 35.1 ± 37.0 , p=0.046), and the mean PSQI was higher in all three groups (7.94 ± 3.97) vs. 5.35±4.13; 7.21±4.59 vs. 5.35±4.13; 7.13±4.62 vs. 5.35 ± 4.13 , p=0.006) when compared with the controls. No significant difference was found between the groups. A positive correlation was detected in the duration of LT4 use and BDI and SSI, and a weak, negative correlation was detected between TSH levels and ASI and PSQI. Based on our study, it was found that depression, anxiety disorders, and sleep problems were more prevalent in patients with DTC, being more prominent in the suppressed TSH group. These results were inversely correlated with TSH values and positively correlated with the duration of LT4 use. Unnecessary LT4 oversuppression should be avoided in patients with DTC.

DOES DAILY FASTING SHIELDING KIDNEY ON HYPERGLYCEMIA-RELATED INFLAMMATORY CYTOKINE VIA TNF-A, NLRP3, TGF-B1 AND VCAM-1 MRNA EXPRESSION

Arzu Bilen¹, Ilknur Calik², Muhammed Yayla³, Busra Dincer⁴, Taha Tavaci⁵, Irfan Cinar⁶, Habip Bilen¹, Elif Cadirci⁷, Zekai Halici⁷, Filiz Mercantepe⁸ Int J Biol Macromol. 2021 Nov 1;190:911-918. doi: 10.1016/j.ijbiomac.2021.08.216. Epub 2021 Sep 4. PMID: 34492249 DOI: 10.1016/j.ijbiomac.2021.08.216

This study aimed to investigate the effects of blood glucose control and the kidneys' functions, depending on fasting, in the streptozotocin-induced diabetes model in rats via TNF- α , NLRP-3, TGF- β 1 and VCAM-1 mRNA expression in the present study. 32 Wistar albino rats were allocated randomly into four main groups; H (Healthy, n = 6), HF (Healthy fasting, n = 6), D (Diabetes, n = 10), DF (Diabetes and fasting, n = 10). Blood glucose and HbA1c levels significantly increased in the D group compared to the healthy ones (p <0.05). However, the fasting period significantly improved blood glucose and HbA1c levels 14 days after STZ induced diabetes in rats compared to the D group. Similar findings we obtained for serum (BUN-creatinine) and urine samples (creatinine and urea levels). STZ induced high glucose levels significantly up-regulated TNF-a, NLRP-3, TGF-B1 and VCAM-1 mRNA expression and fasting significantly decreased these parameters when compared to diabetic rats. Histopathological staining also demonstrated the protective effects of fasting on diabetic kidney tissue. In conclusion, intermittent fasting regulated blood glucose level as well as decreasing harmful effects of diabetes on kidney tissue. The fasting period significantly decreased the hyperglycemiarelated inflammatory cytokine damage on kidneys and also reduced apoptosis in favor of living organisms.

ORGAN-SPECIFIC AUTOIMMUNE MARKERS IN ADULT PATIENTS WITH TYPE 1 DIABETES MELLITUS

Muhammet Cuneyt Bilginer¹, Sevgul Faki², Didem Ozdemir³, Husniye Baser³, Burcak Polat³, Nagihan Bestepe, Oya Topaloglu³, Reyhan Ersoy³, Bekir Cakir³

Int J Clin Pract. 2021 Dec;75(12):e14842. doi: 10.1111/ijcp.14842. Epub 2021 Sep 22. PMID: 34553457 DOI: 10.1111/ijcp.14842

Aim: We aimed to investigate the presence of thyroid, celiac disease (CD) and anti-parietal cell antibodies (APCA) in adult type 1 diabetes (T1DM) patients.

Methods: Data of 287 T1DM patients >16 years old were reviewed retrospectively. Thyroid disease related, CD related antibodies and APCA were evaluated. Patients were divided into early onset (<30 years old) and late-onset (\geq 30 years old) TIDM, and \leq 10 years, 11-20 years and >20 years according to disease duration.

Results: There were 142 (49.5%) female and 145 (50.5%) male patients. The median age at diagnosis and disease duration were 21 (2-53) and 6.91 (0-50.8) years, respectively. Antibody positivity rates were anti-glutamic acid decarboxylase (anti-GAD) 72.8%, anti-insulin 9.1%, anti-islet cell 25.7%, antithyroid peroxidase (anti-TPO) 34.8%, anti-

thyroglobulin 19.9%, anti-endomysial IgA (EMA-IgA) 7.6%, anti-gliadin IgA (AGA-IgA), 12.2%, AGA-IgG 13.0%, tissue transglutaminase IgA 7.1% and APCA 14.4%. One hundred twenty-eight (44.6%) patients had at least one non-diabetes autoantibody. Thyroid autoantibodies and dysfunction were significantly higher in women than men. Anti-TPO positivity was higher in the late-onset group (P = .044). Anti-GAD level was correlated with thyroid related antibody positivity in male patients with positive anti-GAD (r: .340, P: .006). The positivity of EMA-IgA and AGA-IgA was higher in patients with disease duration >20 years (P = .017 and .039, respectively).

Conclusion: Almost half of the adult T1DM patients were positive for at least one non-diabetic antibody. It is important to investigate thyroid autoimmunity in patients diagnosed with T1DM at any age, including advanced age. CD associated antibody positivity increases with disease duration, suggesting that they should be re-evaluated at clinical suspicion, even if prior tests were negative.

DOES CELIAC DISEASE IMPAIR CORONARY MICROVASCULAR CIRCULATION: CORONARY FLOW VELOCITY RESERVE OF PATIENTS WITH CELIAC DISEASE

Zuhal Caliskan¹, Ozge Telci Caklili², Resul Kahraman¹, Fatma Betul Ozcan³, Suleyman Sayar¹, Osman Kostek⁴, Kenan Demircioglu³, Yusuf Yilmaz³, Seref Kul³, Mustafa Caliskan³

Echocardiography. 2020 Jan;37(1):34–40. doi: 10.1111/echo.14554. Epub 2019 Dec 9. PMID: 31816123 DOI: 10.1111/echo.14554

Background: Celiac disease (CD) is an enteropathy characterized with immune reaction to gliadin protein.

Aim: In this study, we aimed to assess effect of CD on coronary microvascular circulation and the association between coronary flow velocity reserve (CFVR) and hs-CRP/ Albumin ratio.

Material and methods: Study was conducted between March 2017 and November 2018 with CD at Umraniye Training and Research Hospital Gastroenterology Clinic. CFVR was defined as the ratio of hyperemic to baseline diastolic peak velocities. CFVR \geq 2.0 was considered normal. C-reactive protein/albumin ratio (CAR) was calculated as hs-CRP/albumin.

Results: Serum albumin $(4.27 \pm 0.56 \text{ vs } 4.50 \pm 0.34; \text{P})$ value: .04) level was significantly lower in celiac group but higher Hs-CRP ($2.44 \pm 1.24 \text{ vs } 1.82 \pm 1.29$; P value < .01), hs-CRP/albumin ratio ($0.57 \pm 0.30 \text{ vs } 0.41 \pm 0.31$; P value: .03) were recorded in celiac group. Both hyperemic flow and CFVR substantially lower in the celiac group compared to controls. In univariate analysis; age, hs-CRP, and hs-CRP/ albumin ratio were associated with low CFVR and hs-CRP/ albumin level was an accurate predictor of low CFVR at the ROC curve.

Conclusion: In this study, we found that in patients with CD, coronary flow reserve is impaired.

THE MISSING LINK BETWEEN INFLAMMATION AND ARTERIAL STIFFNESS AMONG DIFFERENT METABOLIC PHENOTYPES

Asena Gökçay Canpolat¹, Özgür Demir¹, Mustafa Şahin¹, Rıfat Emral¹, Demet Çorapçıoğlu¹

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Objectives: Although metabolically healthy obesity (MHO) has begun to be seen as a being benign phenomenon, this conclusion is still not completely certain. Obesity is also associated with low-grade systemic inflammation and endothelial dysfunction. Thus, we aimed to assess Pulse Wave Velocity (PWV) as a marker of arterial stiffness and CV risk among individuals with MHO, metabolically unhealthy obesity (MUO), and metabolically healthy normal-weight (MHN).

Methods: 150 participants (n = 50 MHO, n = 50 MUO, n = 50 MHN) who had been admitted to our outpatient clinics were enrolled in this cross-sectional study. Demographic, anthropometric, clinical, and laboratory data, including hs-CRP and PWV, were recorded for all subjects.

Results: hs-CRP and PWV were higher in MUO and MHO than MHN individuals (P <.05). hs-CRP showed a strong positive correlation with PWV (r = 0.85, P <.001). After adjusting for other risk factors, multivariate linear regression analysis showed that the PWV was independently associated with BMI (β = 0.08, P = .03), WC (β = 0.04, P = .04) and hs-CRP (β = 6.08, P <.001).

Conclusions: PWV, which is an important non-invasive marker of cardiovascular risk, is higher in MHO than in MHN as in MUO individuals. Moreover, PWV was positively correlated with the serum hs-CRP level as a conventional marker for systemic inflammation. Thus, MHO can be seen as a cardiometabolic risk marker.

COMPARATIVE EVALUATION OF CLINICAL EFFICACY AND SAFETY OF COLLAGEN LAMININ-BASED DERMAL MATRIX COMBINED WITH RESVERATROL MICROPARTICLES (DERMALIX) AND STANDARD WOUND CARE FOR DIABETIC FOOT ULCERS

Şevki Çetinkalp¹, Evren Homan Gökçe¹, IlgınYıldırım Şimşir¹, Sakine Tuncay Tanrıverdi¹, Fatma Doğan¹, Çığır Biray Avcı¹, İpek Eroğlu², Tülün Utku¹. Cumhur Gündüz¹. Özgen Özer¹

Int J Low Extrem Wounds. 2021 Sep;20(3):217–226. doi: 10.1177/1534734620907773. Epub 2020 Mar 4. PMID: 32131656 DOI: 10.1177/1534734620907773

This is an open, prospective, comparative parallel-arm medical device clinical study of Dermalix (Dx) in diabetic foot wounds. Dx is a 3-dimensional collagen-laminin porous-structured dermal matrix prepared and additionally impregnated with resveratrol-loaded hyaluronic acid and dipalmitoylphosphatidylcholine-based microparticles. The aim was to evaluate the efficacy and safety of Dx, an investigational medical device, in Wagner 1 and 2 wounds in comparison to a standard wound care (SWC) that consists of

irrigation and cleaning with sterile saline solution. Forty-eight patients were randomized to receive either SWC or SWC + Dx. A 4-week treatment period was followed by a 2-month follow-up without treatment. The wound area measurement, total collagen, vascular epidermal growth factor, tumor necrosis factor, interleukin 1, caspase 3, glutathione, reduced/ oxidized glutathione, and lipid peroxidation levels were evaluated. At the end of 4 weeks, the percentage closures of wounds were determined as 57.82% for Dx, and 26.63% for SWC groups. Dx had a significant effect on tumor necrosis factor, caspase 3, and reduced/oxidized glutathione levels. Dx provided 2 times faster wound healing and decreased oxidative stress. Application of Dx in the first phase of wound would help the wound area heal faster with a safe profile.

INSULIN RESISTANCE AND CANCER: IN SEARCH FOR A CAUSAL LINK

Eusebio Chiefari¹, Maria Mirabelli¹, Sandro La Vignera², Sinan Tanyolaç³, Daniela Patrizia Foti⁴, Antonio Aversa⁴, Antonio Brunetti¹ Int J Mol Sci. 2021 Oct 15;22(20):11137. doi: 10.3390/ijms222011137. PMID: 34681797 PMCID: PMC8540232 DOI: 10.3390/ijms222011137

Insulin resistance (IR) is a condition which refers to individuals whose cells and tissues become insensitive to the peptide hormone, insulin. Over the recent years, a wealth of data has made it clear that a synergistic relationship exists between IR, type 2 diabetes mellitus, and cancer. Although the underlying mechanism(s) for this association remain unclear, it is well established that hyperinsulinemia, a hallmark of IR, may play a role in tumorigenesis. On the other hand, IR is strongly associated with visceral adiposity dysfunction and systemic inflammation, two conditions which favor the establishment of a pro-tumorigenic environment. Similarly, epigenetic modifications, such as DNA methylation, histone modifications, and non-coding RNA, in IR states, have been often associated with tumorigenesis in numerous types of human cancer. In addition to these observations, it is also broadly accepted that gut microbiota may play an intriguing role in the development of IR-related diseases, including type 2 diabetes and cancer, whereas potential chemopreventive properties have been attributed to some of the most commonly used antidiabetic medications. Herein we provide a concise overview of the most recent literature in this field and discuss how different but interrelated molecular pathways may impact on tumor development.

ARE CLINICOPATHOLOGICAL FEATURES OF THE ISTHMIC THYROID NODULE DIFFERENT FROM NODULES IN THYROID LOBES? A SINGLE CENTER EXPERIENCE

Fatma Dilek Dellal¹, Oya Topaloglu², Husniye Baser², Ahmet Dirikoc², Afra Alkan³, Aysegul Aksoy Altinboga⁴, Ibrahim Kilinc⁵, Reyhan Ersoy², Bekir Cakir² Arch Endocrinol Metab. 2021 Nov 3;65(3):277-288. doi: 10.20945/2359-3997000000345. Epub 2021 Apr 12. PMID: 33844891 DOI: 10.20945/2359-3997000000345

Objective: Thyroid nodules located in isthmus were found less prevalent, although papillary thyroid cancer in this location was reported to be more aggressive behaviour in some studies. Our aim was to evaluate hormonal, ultrasonographic, and cytopathologic features of nodules located in isthmus (isthmic nodules).

Methods: Patients who underwent thyroidectomy between 2006-2014 reviewed retrospectively. Hormonal, ultrasonographic, and cytopathologic features compared between patients with isthmic (Group-1) and with lober (non-isthmic, Group-2) nodules.

Results: Group-1 and Group-2 consisted of 251 and 2076 patients, respectively. 260 isthmic (5.5%) and 4433 non-isthmic (94.5%) nodules were compared. However, most ultrasonographical features such as presence of microcalcification and halo, diameters, echogenicity, texture, margin, and vascularity were similar between groups, macrocalcification rate was lower in isthmic nodules (18.8%, 25.9%; p = 0.012). Cytologic results were also similar. Although malignancy rate was lower in isthmic nodules (6.2%, 12.5%; p = 0.002), type of thyroid cancer was similar in isthmic and non-isthmic nodules. When malignant is thmic (n = 16,2.8%) and malignant non-isthmic nodules (n = 553, 97.2%) were compared, diameter and type of tumor, lymphovascular and capsular invasions, extrathyroidal extension and multifocality rates were not statistically significant. Malignant isthmic nodules (n = 16, 6.2%) had smaller size [10.1 (7.5-34.5) mm, 19.95 (8.4-74.1) mm; p = 0.002], and higher hypoechogenicity rate (31.3%, 5.7%, p = 0.003) compared to benign isthmic nodules (n = 244, 93.8%). Negative predictive value was higher and positive predictive value was lower in isthmic nodules compared to non-isthmic nodules (p = 0.033, p = 0.047, respectively).

Conclusion: Isthmic nodules appear to be indolent because of having lower malignancy rate. FNAB might be required in isthmic nodules even if it has relatively small size. The surgery with limited extent or follow-up might seem to be reliable in the management of patients having isthmic nodules especially with indeterminate cytology.

NO ASSOCIATION OF GAUCHER DISEASE WITH COVID-19-RELATED OUTCOMES: A NATIONWIDE COHORT STUDY

Ibrahim Demirci¹, Tevfik Demir², Selcuk Dagdelen³, Cem Haymana¹, Ilker Tasci⁴, Aysegul Atmaca⁵, Derun Ertugrul⁶, Naim Ata⁷, Mustafa Sahin⁸, Serpil Salman⁹, Ibrahim Sahin¹⁰, Rifat Emral⁸, Ugur Unluturk³, Erman Cakal¹¹, Osman Celik¹², Murat Caglayan¹³, Ilhan Satman¹⁴, Alper Sonmez¹⁵

Intern Med J. 2021 Dec 23. doi: 10.1111/imj.15673. Online ahead of print. PMID: 34939733 DOI: 10.1111/imj.15673

Background: It is well documented that patients with chronic metabolic diseases such as diabetes and obesity are adversely affected by the Covid 19 pandemic. However, when the subject is rare metabolic diseases, there is not enough data in the literature.

Aim: To investigate course of COVID-19 among patients with Gaucher disease (GD), the most common lysosomal storage disease.

Methods: Based on the National Health System data, a retrospective cohort of patients with confirmed (PCR positive) COVID-19 infection (n = 149 618) was investigated. The adverse outcomes between patients with GD (n = 39) and those without GD (n = 149 579) were compared in crude and propensity score matched (PSM) groups. The outcomes were hospitalization, the composite of intensive care unit (ICU) admission and/or mechanical ventilation and mortality.

Results: The patients with GD were significantly older and had a higher frequency of hypertension, T2DM, dyslipidemia, asthma or COPD, chronic kidney disease, coronary artery disease, heart failure, and cancer. Although hospitalization rates in Gaucher patients were found to be higher in crude analyzes, the PSM models (model 1, ageand gender-matched; model 2, matched for age, gender, hypertension, T2DM, and cancer) revealed no difference for the outcomes between patients with GD and the general population. According to multivariate regression analyses, having a diagnosis of GD was not a significant predictor for hospitalization (p = 0.241), ICU admission/mechanical ventilation (p = 0.403) or mortality (p = 0.231).

Conclusion: According to our national data, SARS-CoV-2 infection in patients with GD does not have a more severe course than the normal population. This article is protected by copyright. All rights reserved.

SEROLOGIC TESTING FOR CELIAC DISEASE IN GRAVES' HYPERTHYROIDISM: SHOULD WE ACT EARLY?

Hande Demirdere¹, Ozge Telci Caklili¹², Sema Yarman¹² Endocr Res. 2021 Aug 10;1-6. doi: 10.1080/07435800.2021.1959607. Online ahead of print. PMID: 34374618 DOI: 10.1080/07435800.2021.1959607

Background: The general practice is to screen patients with autoimmune thyroid disease for celiac disease (CD); however, optimal timing for CD screening for patients with Graves'Disease (GD) has not been identified yet. The aim of the study was to show whether positive celiac antibodies persist after euthyroidism is achieved.

Materials and Methods: Serum samples were collected from 35 patients with GD (23 female and 12 male) who applied to the endocrine outpatient clinic. Patients and healthy controls were screened for CD with IgG and IgA antigliadin antibodies (IgG - AGA and IgA - AGA), IgA endomysial antibody (IgA-EMA) and IgA tissue transglutaminase antibody (IgA anti-tTG). These antibodies were reevaluated when patients were euthyroid under antithyroid therapy. Small intestine biopsy was offered to the patients who remained antibody positive after being euthyroid.

Results: Screening 35 patients with GD revealed positive results for IgA-AGA (n = 6/35, 17%), IgG-AGA (n = 9/35, 26%), IgA-EmA (n = 2/35, 6%) and IgA-tTG (n = 2/35, 6%). No patient had multiple antibodies positive. Selective IgA deficiency was not detected in patients and controls. When patients were euthyroid, baseline positive IgA-AGA, IgG-AGA, and IgA-EmA became negative, while positive anti-tTG persisted in two patients. Endoscopic duodenal biopsy showed a normal villi/crypts ratio in these patients. None of the controls had positive antibodies.

Conclusion: Due to possibility of false seropositivity of celiac antibodies in patients with Graves' thyrotoxicosis, one should defer testing for CD until euthyroidism has been achieved.

THE VALUE OF SERUM THYROGLOBULIN ALTERATION AFTER ULTRASONOGRAPHY-GUIDED FINE-NEEDLE BIOPSY OF SUSPICIOUS CERVICAL LYMPH NODES IN THE DIAGNOSIS OF METASTASIS IN PATIENTS WITH DIFFERENTIATED THYROID CANCER

Fatma Dilek Dellal¹, Cevdet Aydin², Abbas Ali Tam², Sevgul Faki¹, Afra Alkan³, Sefika Burcak Polat², Ahmet Dirikoc², Oya Topaloglu², Reyhan Ersoy², Bekir Cakir²

Int J Clin Pract. 2021 Jul;75(7):e14218. doi: 10.1111/ijcp.14218. Epub 2021 May 9. PMID: 33866655 DOI: 10.1111/ijcp.14218

Background: It is known that serum thyroglobulin (TG) can increase after fine-needle biopsy of thyroid nodules. We aimed to determine whether TG is increased after ultrasonography (US)-guided fine needle capillary biopsy (FNC) of suspicious cervical lymph nodes (LNs) in thyroidectomised patients and investigate the possible association between change in TG and cytology results.

Material and methods: Data of 188 patients who underwent FNC of suspicious cervical LNs were retrospectively evaluated. Demographical, laboratory and ultrasonography features of LNs were noted. TG levels before FNC (TG_{b-FNC}), after FNC (TG_{a-FNC}), TG_{a-FNC}/TG_{b-FNC} ratio and the number of patients with increased TG were determined. Patients were grouped as benign, nondiagnostic, suspicious for malignancy and malignant according to the cytological results.

Results: TG_{a-FNC}, TG_{b-FNC} /TG_{a-FNC} and rate of patients with increased TG were significantly higher in malignant cytology group than other groups (P <.001). The optimal cut-off level of TG increase that was predictive for malignancy was 7.6% with a sensitivity of 73.7% and specificity of 85.2%. TG increase was not associated with age, sex, Thyroid-stimulating hormone (TSH) level, anti-TG positivity and US features of LNs while significantly lower in patients who received radioactive iodine (RAI) treatment. Among 31 patients with positive anti-TG, TG_{b-FNC} /TG_{a-FNC}, and rate of patients with increased TG were higher in malignant compared to benign and nondiagnostic cytology groups.

Conclusions: Serum TG increment and rate of patients with increased TG after FNC of suspicious cervical LNs were higher in patients with malignant cytology than with all other cytology results both in all study group and in sub-group of anti-TG positive patients. Increase in TG after FNC might be an additional tool for determining LN metastasis.

THE EVOLVING ROLE OF FETUIN-A IN NONALCOHOLIC FATTY LIVER DISEASE: AN OVERVIEW FROM LIVER TO THE HEART

Teoman Dogru¹, Ali Kirik², Hasan Gurel³, Ali A Rizvi⁴⁵, Manfredi Rizzo⁵⁶, Alper Sonmez⁷

Int J Mol Sci. 2021 Jun 21;22(12):6627. doi: 10.3390/ijms22126627. PMID: 34205674 PMCID: PMC8234007 DOI: 10.3390/ijms22126627

Nonalcoholic fatty liver disease (NAFLD) is strongly associated to the features of metabolic syndrome which can progress to cirrhosis, liver failure and hepatocellular carcinoma. However, the most common cause of mortality in people with NAFLD is not liver-related but stems from atherosclerotic cardiovascular disease (CVD). The prevalence of NAFLD is on the rise, mainly as a consequence of its close association with two major worldwide epidemics, obesity and type 2 diabetes (T2D). The exact pathogenesis of NAFLD and especially the mechanisms leading to disease progression and CVD have not been completely elucidated. Human fetuin-A (alpha-2-Heremans Schmid glycoprotein), a glycoprotein produced by the liver and abundantly secreted into the circulation appears to play a role in insulin resistance, metabolic syndrome and inflammation. This review discusses the links between NAFLD and CVD by specifically focusing on fetuin-A's function in the pathogenesis of NAFLD and atherosclerotic CVD.

GLUCAGON-LIKE PEPTIDE-1 RECEPTOR AGONIST TREATMENT OF HIGH CARBOHYDRATE INTAKE-INDUCED METABOLIC SYNDROME PROVIDES PLEIOTROPIC EFFECTS ON CARDIAC DYSFUNCTION THROUGH ALLEVIATIONS IN ELECTRICAL AND INTRACELLULAR CA ²⁺ ABNORMALITIES AND MITOCHONDRIAL DYSFUNCTION

Aysegul Durak¹, Erman Akkus², Asena Gokcay Canpolat³, Erkan Tuncay¹, Demet Corapcioglu³, Belma Turan¹⁴

Clin Exp Pharmacol Physiol. 2022 Jan;49(1):46-59. doi: 10.1111/1440-1681.13590. Epub 2021 Oct 27. PMID: 34519087 DOI: 10.1111/1440-1681.13590

The pleiotropic effects of glucagon-like peptide-1 receptor (GLP-1R) agonists on the heart have been recognised in obese or diabetic patients. However, little is known regarding the molecular mechanisms of these agonists in cardioprotective actions under metabolic disturbances. We evaluated the effects of GLP-1R agonist liraglutide treatment on left ventricular cardiomyocytes from high-carbohydrate induced metabolic syndrome rats (MetS rats), characterised with insulin resistance and cardiac dysfunction with a long-QT. Liraglutide (0.3 mg/kg for 4 weeks) treatment of MetS rats significantly reversed long-QT, through a shortening the prolonged action potential duration and recovering inhibited K⁺ -currents. We also determined a significant recovery in the leaky sarcoplasmic reticulum (SR) and high cytosolic Ca^{2+} -level, which are confirmed with a full recovery in activated Na⁺ /Ca²⁺ -exchanger currents (I_{NCX}). Moreover, the liraglutide treatment significantly reversed the depolarised mitochondrial membrane potential (MMP). increased production of oxidant markers, and cellular acidification together with the depressed ATP production. Our light microscopy analysis of isolated cardiomyocytes showed marked recoveries in the liraglutide-treated MetS group such as marked reverses in highly dilated T-tubules and SR-mitochondria junctions. Moreover, we determined a significant increase in depressed GLUT4 protein level in liraglutide-treated MetS group, possibly associated with recovery in case in kinase 2α . Overall, the study demonstrated a molecular mechanism of liraglutide-induced cardioprotection in MetS rats, at most, via its pleiotropic effects, such as alleviation in the electrical abnormalities, Ca²⁺ -homeostasis, and mitochondrial dysfunction in ventricular cardiomyocytes.

FIBROBLAST GROWTH FACTOR RECEPTOR-4 EXPRESSION IN PITUITARY ADENOMAS IS ASSOCIATED WITH AGGRESSIVE TUMOR FEATURES

Emre Durcan¹, Fatma Ela Keskin², Hande Mefkure Ozkaya¹, Sabri Sirolu³, Serdar Sahin¹, Ozge Polat Korkmaz¹, Nurperi Gazioglu⁴, Necmettin Tanriover⁵, Nil Comunoglu⁶, Buge Oz⁶, Osman Kizilkilic³, Pinar Kadioglu¹ Exp Clin Endocrinol Diabetes. 2021 Jul 12. doi: 10.1055/a-1523-7216. Online ahead of print. PMID: 34255320 DOI: 10.1055/a-1523-7216

Purpose: To investigate the relationship of Fibroblast Growth Factor Receptor-4 (FGFR-4) expression with radiologic, pathologic, and clinical parameters in pituitary adenomas.

Methods: Among 307 patients who underwent pituitary surgery for a pituitary adenoma between 2000 and 2015, we included 161 patients (53 gonadotroph, 26 corticotroph, 25 null cell, 22 lactotroph, 13 somatotroph, 8 adenomas with unusual combination, 7 Pit-1 positive adenomas, and 7 lactosomatotroph) based on availability of pathology specimens. Patients' radiologic, pathologic, and clinical parameters were determined. FGFR-4 immunostaining was evaluated using a semi-quantitative histologic score (H-score).

Results: The mean follow-up period was 61 (IQR=32-84) months. The median H-scores for FGFR-4 were higher in patients without remission, those with residual lesion, and T2-hyperintense adenoma (p<0.05). Ki-67 level was higher in patients without remission compared to those in remission (p<0.05). The mean Ki-67 levels did not differ between patients with and without residual lesion or T2-hyperintense tumor (p > 0.05). There was no significant difference (p > 0.05) when the H-score and Ki-67 levels were assessed in terms of sex, sellar-dural invasion, Knosp and a grading system for superior, inferior, parasellar, anterior and posterior tumor extension Classification, tumor function or presence of poor subtype. Adenomas with Ki-67 expression $\geq 3\%$ had higher FGFR4 expression levels than those with <3% expression (p=0.002). There was a weak positive correlation between H-score and Ki-67 (p=0.011; r=0.201).

Conclusions: Higher levels of FGFR-4 in pituitary adenomas could be use a marker for more aggressive tumor behavior.

CAN "VAI" BETTER INDICATE METABOLIC SYNDROME COMPARED WITH OTHER METABOLIC SYNDROME-RELATED PARAMETERS IN PATIENTS WITH THYROID NODULES? A STUDY FROM TURKEY

Emre Durcan¹, Serdar Sahin¹, Selin Ece Dedeoglu¹, Hande Mefkure Ozkaya¹, Mustafa Sait Gonen¹

Metab Syndr Relat Disord. 2021 Aug;19(6):358-366. doi: 10.1089/met.2020.0147. Epub 2021 Apr 1. PMID: 33794138 DOI: 10.1089/met.2020.0147

Background: To investigate the relationship between visceral adiposity index (VAI) and other metabolic syndrome (MetS)-related parameters, and thyroid nodules.

Methods: This single-center, prospective, case-control study included 67 patients with thyroid nodules and 48 healthy volunteers with similar age, sex, and body mass index (BMI). Biochemical parameters were obtained from medical charts.

Anthropometric measurements and total body composition analysis were performed to calculate VAI and other MetS parameters. The parenchymal structure was evaluated according to VESINC (Volume, Echogenicity, Sonographic texture, Infiltration of pseudonodular Nodules, Cysts) system on thyroid ultrasound and nodule characteristics were also detected. MetS was defined according to International Diabetes Federation criteria.

Results: We examined a total of 67 patients with thyroid nodule and 48 healthy volunteers. Sixty-one (91%) were female in the patient group; and 43 (90%) were female in the control group. The mean age was 48.5 \pm 11.6 years in the patient group; 47.2 \pm 9.5 years in the control. The median VAI was significantly higher in the patient group than the control group [4.1 interquartile range (IQR: 2.6-5.9) vs. 3 (IQR: 2-4.3), P = 0.024]. There was a positive correlation between VAI and BMI, waist/hip ratio (WHpR), waist/height ratio (WHtR), and homeostasis of model assessment of insulin resistance (HOMA-IR). On the other hand, there was no significant correlation between VAI and thyroid function tests and autoantibodies and thyroid volume.

Conclusions: In conclusion, we demonstrated that MetS was more common in patients with thyroid nodules. Although VAI and HOMA-IR levels were significantly different between the two groups, we found no significant difference in terms of waist circumference, WHpR, and WHtR. This might suggest that VAI compared with these parameters, better predicts the risk of MetS in patients with thyroid nodules.

TRANSPHOBIC ATTITUDE: IN PHYSICIANS WHO PLAY AN ACTIVE ROLE IN THE GENDER TRANSITION PROCESS

Emre Durcan¹, Serdar Sahin¹, Gizem Durcan², Yasin Kavla³, Hande Mefkure Ozkaya¹, senol Turan³ & Pınar Kadıoğlu¹

Endocrine Abstracts (2020) 70 AEP824 | DOI: 10.1530/endoabs.70.AEP824 Reproductive and Developmental Endocrinology

Transphobia is expressed as negative attitudes, emotions and actions towards transgender individuals or transsexualism. The aim of this study is to investigate the existence of transphobic approaches towards transgender individuals in physicians in different clinics that play an active role in the gender transition process. It was planned to include physicians from the disciplines of psychiatry, endocrinology, gynecology, urology and plastic surgery. A questionnaire was sent to these physicians via internet and the participants were asked to answer "the Genderism and Transphobia Scale" and sociodemographic questions such as academic title, type of institution, age, gender, place of birth and residence, marital status, sexual orientation and religious belief. Also, no names and surnames were requested from these people. Increased scale scoreshows the presence of higher transphobia. The number of physicians who completed the study on the internet was 455. The mean age was 37.03 ± 9.59 years. The male to female ratio was 1.12. Of the participants, 23 (27%) were psychiatrists, 107 (23.5%) were endocrinologists, 93 (20.4%) were gynecologists, 88 (19.3%) were urologists and 44 (9.7%) were plastic surgeon. 203 (44.6%) of the participants defined themselves as belong to a religion, 106 (23.3%) as

deist, 91 (20%) as religious and 55 as atheist. And, 94.9% of the participants were heterosexual. According to disciplines, there was a significant difference between groups in term of the mean total scores of transphobia scale (P < 0.001). In the post-hoc analysis to understand the reason for the difference, scale scores of psychiatrists were significantly lower than endocrinologists, plastic surgeons, and urologists, and did not differ from gynecologists. Morever, we found that urologists' scale scores were significantly higher than gynecologists. When the participants were categorized according to their religious self-definition; the mean total scores of scale were significantly different between groups (P < 0.001). While the mean scores of those who define themselves as atheists and deists were lower than those who belong to a religion and religious, Psychiatrists are in an important role in the psychotherapy process, which is used to diagnose transgender individuals and to cope with the difficulties these individuals experience in society and in the gender transition process. For this reason, it can be thought that psychiatrists show less transphobic approaches than other disciplines. This study shows that transphobia may be at different levels according to the discipline of physicians and there may be differences as a result of individual characteristics.

PSYCHOSOCIAL EFFECTS AND CLINIC REFLECTIONS OF THE COVID-19 OUTBREAK IN PATIENTS WITH ACROMEGALY AND CUSHING'S DISEASE

Emre Durcan¹, Senol Turan², Serdar Sahin¹, Cem Sulu¹, Sabriye Sibel Taze¹, Yasin Kavla², Hande Mefkure Ozkaya¹, Pinar Kadioglu³ Pituitary. 2021 Aug;24(4):589-599. doi: 10.1007/s11102-021-01136-5. Epub 2021 Mar 5. PMID: 33665771 PMCID: PMC8356216 DOI: 10.1007/s11102-021-01136-5

Purpose: Patients with acromegaly and Cushing's disease (CD) may experience significant problems related to the COVID-19 outbreak. We aimed to investigate the psychosocial effects of the pandemic and reveal the follow-up characteristics.

Methods: The single center, cross-sectional, web-based survey study included patients with acromegaly and CD, PCR-confirmed COVID-19 patients and healthy volunteers without known any chronic disease. The semi-structured sociodemographic data form, The State-Trait Anxiety Inventory (STAI) and Impact of Event Scale-Revised (IES-R) were used.

Results: We examined 583 people (217 acromegaly, 127 CD, 102 PCR-confirmed COVID-19 patients and 137 healthy controls). The frequency of abnormal state anxiety and post-traumatic stress disorder (PTSD) were similar in patients with acromegaly and CD and healthy controls, and higher in PCR-confirmed COVID-19 patients than in these three groups (p <0.001 for both). The frequency of abnormal trait anxiety was higher in patients with acromegaly and PCR-confirmed COVID-19 compared to patients with CD and healthy controls (p = 0.027, p <0.001, respectively). There were no significant differences between the acromegaly and CD groups in terms of follow-up characteristics and perception of the severity of the COVID-19 outbreak (p > 0.05 for all). But, the treatment discontinuation rate was higher in patients with acromegaly than CD (p = 0.012).

Conclusions: Our findings indicate that acromegaly and CD patients are psychologically less affected than PCR-confirmed COVID-19 patients and exhibit similar findings the general population. The clinicians should consider the psychosocial effects, as well as focus on the regular follow-up and medical treatments of these patients during the outbreak.

CLINICOPATHOLOGICAL VARIABLES THAT CORRELATE WITH SESTAMIBI POSITIVITY IN UNIGLANDULAR PARATHYROID DISEASE: A RETROSPECTIVE ANALYSIS OF 378 PARATHYROID ADENOMAS

Elif Tutku Durmuş¹, Ayşegül Atmaca², Mehmet Kefeli³, Özgür Mete⁴⁵, Fevziye Canbaz Tosun⁶, Deniz Bayçelebi³, Cafer Polat⁷, Ramis Çolak² Ann Nucl Med. 2022 Jan;36(1):33-42. doi: 10.1007/s12149-021-01681-w. Epub 2021 Sep 28. PMID: 34580842 DOI: 10.1007/s12149-021-01681-w

Purpose: Technetium-99 m sestamibi parathyroid scintigraphy (MIBI scan) has been used to localize abnormal glands in patients with primary hyperparathyroidism to guide parathyroidectomy. This series aimed to identify the biochemical and histopathological correlates of MIBI scan findings in patients with parathyroid adenoma.

Methods: A total of 378 patients with histologically and biochemically proven parathyroid adenoma were included. The results of MIBI scan, histopathological (gland volume and weight, oxyphil cell ratio), biochemical (blood and 24 h urine calcium, creatinine, glomerular filtration rate, parathormone, alkaline phosphate, and vitamin D3) variables were recorded. A positive uptake on the MIBI scan referred to a localized adenoma. Among histological variables, a cutoff of 30% was applied to define parathyroid adenomas with low (\leq 30%) and high (>30%) oxyphil cell content. Statistical analyses were performed to assess the relationship among variables.

Results: MIBI scan localized the adenoma in 306 patients. Parathyroid gland volume and weight, and oxyphil ratio were significantly higher in the MIBI scan-positive group. Among the biochemical variables, only PTH was found to be significantly increased in the MIBI scan-positive group. Binary logistic regression models identified statistically significant cutoffs for the gland volume (1700 mm³), gland weight (1.3 g) and PTH levels (170 pg/mL) that can be used to predict the MIBI scan positivity.

Conclusion: In addition to PTH levels, this series underscored the impact of cellular composition along with the parathyroid gland volume and weight, both of which correlate with sestamibi positivity in patients with benign uniglandular parathyroid disease.

CARDIAC PHENOTYPE IN FAMILIAL PARTIAL LIPODYSTROPHY

Abdelwahab Jalal Eldin¹, Baris Akinci¹², Andre Monteiro da Rocha³, Rasimcan Meral¹, Ilgin Yildirim Simsir⁴, Suleyman Cem Adiyaman², Ebru Ozpelit⁵, Nicole Bhave⁶, Ramazan Gen⁷, Banu Yurekli⁴, Nilufer Ozdemir Kutbay⁸, Zeynep Siklar⁹, Adam H Neidert¹, Rita Hench¹, Marwan K Tayeh¹⁰, Jeffrey W Innis¹⁰¹¹, Jose Jalife⁶¹², Hakan Oral⁶, Elif A Oral¹ *Clin Endocrinol (Oxf). 2021 Jun;94(6):1043-1053. doi: 10.1111/cen.14426. Epub 2021 Feb 22. PMID: 33502018 DOI: 10.1111/cen.14426*

Objectives: LMNA variants have been previously associated with cardiac abnormalities independent of lipodystrophy. We aimed to assess cardiac impact of familial partial lipodystrophy (FPLD) to understand the role of laminopathy in cardiac manifestations.

Study design: Retrospective cohort study.

Methods: Clinical data from 122 patients (age range: 13-77, 101 females) with FPLD were analysed. Mature human induced pluripotent stem cell-derived cardiomyocytes (hiPSC-CMs) from a patient with an LMNA variant were studied as proof-of-concept for future studies.

Results: Subjects with LMNA variants had a higher prevalence of overall cardiac events than others. The likelihood of having an arrhythmia was significantly higher in patients with LMNA variants (OR: 3.77, 95% CI: 1.45-9.83). These patients were at higher risk for atrial fibrillation or flutter (OR: 5.78, 95% CI: 1.04-32.16). The time to the first arrhythmia was significantly shorter in the LMNA group, with a higher HR of 3.52 (95%) CI: 1.34-9.27). Non-codon 482 LMNA variants were more likely to be associated with cardiac events (vs. 482 LMNA: OR: 4.74, 95% CI: 1.41-15.98 for arrhythmia; OR: 17.67, 95% CI: 2.45-127.68 for atrial fibrillation or flutter; OR: 5.71, 95% CI: 1.37-23.76 for conduction disease). LMNA mutant hiPSC-CMs showed a higher frequency of spontaneous activity and shorter action potential duration. Functional suncutia of hiPSC-CMs displayed several rhythm alterations such as early afterdepolarizations, spontaneous quiescence and spontaneous tachyarrhythmia, and significantly slower recovery in chronotropic changes induced by isoproterenol exposure.

Conclusions: Our results highlight the need for vigilant cardiac monitoring in FPLD, especially in patients with LMNA variants who have an increased risk of developing cardiac arrhythmias. In addition, hiPSC-CMs can be studied to understand the basic mechanisms for the arrhythmias in patients with lipodystrophy to understand the impact of specific mutations.

CLINICAL PERFORMANCE EVALUATION OF A NEWLY DEVELOPED SOCK FOR PEOPLE WITH DIABETES

Berna Cüreklibatır Encan¹, Arzu Marmaralı², Dilek Bayraktar³, Şevki Çetinkalp⁴, Ilgın Yıldırım Şimşir⁴

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Diabetes mellitus (DM) is a chronic disease that has become a global health problem. As the population of people with diabetes is growing worldwide, the prevalence of complications associated with DM, such as diabetic foot, also increases. Neuropathy and high plantar pressure are the two most frequent causes of foot ulceration. Since diabetic wounds tend to heal slowly, it is crucial to prevent diabetic foot ulcers before they occur. In this study, the efficacy of a sock developed for diabetes in the previous research of the authors was investigated in a clinical study with the participation of patients with diabetes over a 6-month period. At the end of the study, it was observed that none of the participants had experienced any new ulcers, bacterial or fungal infections, or callus formation during this research. Moreover, a slight decrease in pressure was observed for the first, second, and third metatarsal bones when the socks were worn on day 1. On the other hand, pressure reduction was identified for the fourth and fifth metatarsal bones in all following measurements. However, analyses revealed that duration of usage did not have a statistically significant effect on overall plantar pressure. It was also found that pressure on the fourth and fifth metatarsal bones significantly decreased. Assessment of wearing comfort revealed the satisfaction of the patients, as well. Based on the promising outcomes of this clinical evaluation, these socks developed for people with diabetes can be strongly expected to help avoid diabetic foot ulcers.

EVALUATION OF SPATIO-TEMPORAL GAIT PARAMETERS AND GAIT SYMMETRY IN DIABETIC POLYNEUROPATHIC PATIENTS WITH BURN INJURY: A PILOT STUDY

Melek Merve Erdem¹, Gonul Koc², Kemal Kismet³, Cınar Yasti⁴, Semra Topuz⁵ Burns. 2020 Jun;46(4):897-905. doi: 10.1016/j.burns.2019.10.022. Epub 2019 Dec 13. PMID: 31843285 DOI: 10.1016/j.burns.2019.10.022

Purpose: The purpose of this study was to investigate the effects of burn injury on spatio-temporal gait parameters and gait symmetry in individuals with diabetic polyneuropathy (DPN)-related lower extremity burn injury.

Methods: Demographic information and the physical examinations of the lower extremities of 14 patients with unilateral lower extremity burn injury due to DPN (DPN_B) and 14 uninjured patients with DPN (DPN_0) were recorded. The GAITRite computerized gait analysis system was used to evaluate the spatio-temporal parameters of gait. Symmetry Index (SI) was calculated to determine gait symmetry. The Mann Whitney U test was used to determine the demographical and clinical differences between the groups, the Wilcoxon's test was used to compare both sides of all the participants for all gait parameters and linear regression analysis was used to find the variables that affect gait parameters.

Results: The groups were similar in terms of their demographic information except for age. Compared with the DPN_0 group, DPN_B group had increased extent of area with sensory loss and severity of DPN, decreased ankle joint range of motions and intrinsic foot muscles strength and they displayed lower gait speed, step length, stride length and swing percentage but their double support and stance percentage were increased.

Conclusion: This study results have shown that, spatiotemporal gait parameters of DPN_B patients are different. These differences in spatiotemporal parameters are found on both sides, probably owing to the symmetric and bilateral sensory loss is superior to unilateral burn injury due to symmetrical and bilateral sensory loss. Gait analysis should be considered in order to reveal the changes in gait parameters and to improve appropriate healing process of patients with DPN-related lower extremity burn injury.

THE EFFECT OF HIGH-DOSE PARENTERAL VITAMIN D₃ ON COVID-19-RELATED INHOSPITAL MORTALITY IN CRITICAL COVID-19 PATIENTS DURING INTENSIVE CARE UNIT ADMISSION: AN OBSERVATIONAL COHORT STUDY

Mehmet Güven¹, Hamza Gültekin²

Eur J Clin Nutr. 2021 Sep;75(9):1383-1388. doi: 10.1038/s41430-021-00984-5. Epub 2021 Jul 23. PMID: 34302132 PMCID: PMC8299443 DOI: 10.1038/s41430-021-00984-5

Background: In many studies, vitamin D has been found to be low in COVID-19 patients. In this study, we aimed to investigate the relationship between clinical course and inhospital mortality with parenteral administration of high-dose vitamin D_3 within the first 24 h of admission to patients who were hospitalized in the intensive care unit (ICU) because of COVID-19 with vitamin D deficiency.

Methods: This study included 175 COVID-19 patients with vitamin D deficiency [25(OH) D <12 ng/mL] who were hospitalized in the ICU. Vitamin D_3 group (n = 113) included patients who received a single dose of 300,000 IU vitamin D3 intramuscularly. Vitamin D_3 was not administered to the control group (n = 62).

Results: Median C-reactive protein level was 10.8 mg/dL in the vitamin D_3 group and 10.6 mg/dL in the control group (p = 0.465). Thirty-nine percent (n = 44) of the patients in the vitamin D_3 group were intubated endotracheally, and 50% (n = 31) of the patients in the control group were intubated endotracheally (p = 0.157). Parenteral vitamin D_3 administration was not associated with inhospital mortality by multivariate logistic regression analysis. According to Kaplan-Meier survival analysis, the median survival time was 16 d in the vitamin D3 group and 17 d in the control group (log-rank test, p = 0.459).

Conclusion: In this study, which was performed for the first time in the literature, it was observed that high-dose parenteral vitamin D_3 administration in critical COVID-19 patients with vitamin D deficiency during admission to the ICU did not reduce the need for intubation, length of hospital stay, and inhospital mortality.

ASSOCIATION OF 25-HYDROXYVITAMIN D LEVEL WITH COVID-19-RELATED IN-HOSPITAL MORTALITY: A RETROSPECTIVE COHORT STUDY

Mehmet Güven¹, Hamza Gültekin²

J Am Coll Nutr. 2021 Aug 9;1–10. doi: 10.1080/07315724.2021.1935361. Online ahead of print. PMID: 34370620 DOI: 10.1080/07315724.2021.1935361

Background: The primary aim of this study was to compare the 25(OH)D level between patients with COVID-19 and the reference population. The secondary aim was to determine the association of 25(OH)D level with COVID-19-related in-hospital mortality.

Methods: The COVID-19-positive group comprised 520 hospitalized patients and the reference population comprised 15,789 COVID-19-negative patients. The 25(OH)D level was categorized as vitamin D deficiency (25[OH]D < 20 ng/mL) and severe vitamin D deficiency (25[OH]D < 12 ng/mL).

Results: While the incidence of vitamin D deficiency was similar in both groups, the incidence of severe vitamin D deficiency was higher in patients with COVID-19 than in the reference population (68.3% [n = 355] vs. 55.1% [n = 8,692], p < 0.001). Severe vitamin D deficiency in patients with COVID-19 was higher in the intensive care unit (ICU) group than in the non-ICU group (75.3% [n = 183] vs. 62% [n = 172], p = 0.001). The incidence of severe vitamin D deficiency was 65.4% (n = 280) in survivors and 81.5% (n = 75) in nonsurvivors (p = 0.003). However, multivariable Cox proportional hazard regression analysis showed no relationship between 25(OH)D level and in-hospital mortality. The median survival times of patients with and without severe vitamin D deficiency were not different, as shown by Kaplan-Meier survival analysis.

Conclusion: Severe vitamin D deficiency is more common in patients with COVID-19 and may play a significant role in worsening the prognosis of these patients. However, the 25(OH)D level was not observed to effect COVID-19-related in-hospital mortality.

THE PROGNOSTIC IMPACT OF THYROID DISORDERS ON THE CLINICAL SEVERITY OF COVID-19: RESULTS OF SINGLE-CENTRE PANDEMIC HOSPITAL

Mehmet Güven¹, Hamza Gültekin² Int J Clin Pract. 2021 Jun;75(6):e14129. doi: 10.1111/ijcp.14129. Epub 2021 Mar 13. PMID: 33655591 PMCID: PMC7995023 DOI: 10.1111/ijcp.14129

Background: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection can cause thyroid hormonal disorders. In addition, tracheal compression by thyroid nodules can aggravate hypoxia in critically ill patients. No studies have investigated the effect of thyroid nodules on the prognosis of patients with COVID-19. In this study, we investigated the effect of thyroid hormonal disorders and thyroid nodules on the prognosis of patients with COVID-19.

Materials and methods: This prospective study was conducted at the Şırnak State Hospital (Pandemic hospital in Turkey) between 15 March and 15 August 2020. We evaluated thyroid hormonal disorder and thyroid nodules

in 125 patients who were admitted to the non-intensive care unit (non-ICU) due to mild COVID-19 pneumonia (group 1) and 125 critically ill patients who were admitted to the ICU (group 2).

Results: Thyroid-stimulating hormone levels (TSH) were not significantly different between groups 1 and 2; however, group 2 patients had significantly lower levels of free thyroxine (FT4) and free triiodothyronine (FT3) as compared to group 1 (P = .005, P <.0001, respectively). FT3 level showed a negative correlation with length of hospital stay and C-reactive protein level (rho: -0.216, p: 0.001; rho: -0.383, P <.0001). Overt thyroid disorder was observed in 13 patients [2 patients in group 1 (both with overt thyrotoxicosis) and 11 patients in group 2 (3 overt hypothyroidism, 8 overt thyrotoxicosis) (P = .01)]. Thyroid nodules sized \geq 1 cm were found in 9 patients (7%) in group 1 and 32 patients (26%) in group 2 (P < .0001).

Conclusion: Overt thyroid hormonal disorders were more common in critically ill COVID-19 patients. FT3 level at hospital admission is a potential prognostic marker of COVID-19 patients. Thyroid nodules may be associated with severe COVID-19 disease.

BURDEN OF DIABETIC FOOT PATIENTS' CAREGIVERS AND AFFECTING FACTORS: A CROSS-SECTIONAL STUDY

Sadık Hançerlioğlu¹, İsmail Toygar¹, Ayşe Ayhan², İrem Yilmaz², Yavuz Orhan³, Göksu S Özdemir³, İlgın Y Şimşir¹, Şevki Çetinkalp¹ Int J Low Extrem Wounds. 2021 Aug 2;15347346211036530. doi:10.1177/15347346211036530. Online ahead of print. PMID: 34338563 DOI: 10.1177/15347346211036530

With the increase in the diabetic foot patients in recent decades, the caregivers of diabetic foot patients increase too. Most of these caregivers are informal caregivers. However, the studies examining the burden of the caregivers and affecting factors are limited. This study was conducted to determine the burden of the caregivers of diabetic foot patients and affecting factors. This cross-sectional study was conducted between the January and October 2020 in a diabetic foot council of a university hospital. Zarit Caregiver Burden Scale and a participant identification form were used for data collection. Most of the caregivers were female (75.2%) and the mean age was 51.27 ± 11.48 years. The burden of the caregivers was at moderate level in the current study. Factors affecting the caregivers' burden were caregivers' age, patients' family structure, caregivers' education level, caregivers' income level, hours per week spending for the care of the patients, and lack of choice.

CUSHING SYNDROME IS ASSOCIATED WITH INCREASED STAGE N2 SLEEP AND DECREASED SWS PARTIALLY REVERSIBLE AFTER TREATMENT

Sevda Ismailogullari¹, Zuleyha Karaca², Sedat Tarik Firat², Kursad Unluhizarci², Fahrettin Kelestimur³

Horm Metab Res. 2021 Sep;53(9):608-615. doi: 10.1055/a-1542-8816. Epub 2021 Sep 8. PMID: 34496411 DOI: 10.1055/a-1542-8816

The aim of the present study was to evaluate the sleep parameters of patients with Cushing syndrome (CS) at the time of diagnosis and 12-months after treatment. Thirty four newly diagnosed patients with endogenous CS (17 with ACTH-secreting pituitary adenoma, 17 with adrenal CS) and 23 controls with similar age were included in the study. Two polysomnography (PSG) recordings were performed; one at the time of diagnosis and the other 12 months after resolution of hypercortisolemia. Control group had only baseline PSG. Based on the PSG findings, stage N2 sleep was found to be prolonged, stage N3 and REM sleep were shortened in patients with CS. Average heart rate and mean Apnea Hypopnea Index (AHI) score were higher in patients with CS than the control subjects. Sixteen (47.1%) patients with CS and 4 (17.4%) controls had obstructive sleep apnea (OSA; AHI \geq 5). There were no significant differences in sleep parameters of patients according to the etiology of CS (adrenal vs. pituitary) patients. Following 12-months of treatment, a significant decrease in stage N2 sleep and a significant increase in stage N3 sleep were detected, but there was no change in terms of AHI. In conclusion, Cushing syndrome has disturbing effects on sleep structure and these effects are at least partially reversible after treatment. However, the increased risk of OSA was not reversed a year after treatment indicating the importance of early diagnosis and treatment of CS.

PERSONALITY TRAITS IN ACROMEGALIC PATIENTS: COMPARISON WITH PATIENTS WITH NON-FUNCTIONING ADENOMAS AND HEALTHY CONTROLS

Elif Kilic Kan¹, Aysegul Atmaca², Gokhan Sarisoy³, Gulcin Cengiz Ecemis², Feyzi Gokosmanoglu²

Growth Horm IGF Res. 2021 Nov 17;62:101439. doi: 10.1016/j.ghir.2021.101439. Online ahead of print. PMID: 34814008 DOI: 10.1016/j.ghir.2021.101439

Objectives: Pituitary diseases may cause psychiatric and personality alterations. We aimed to compare the personality traits of acromegalic patients with those of patients with non-functioning pituitary adenomas and a healthy control group.

Design: Fifty-eight acromegalic patients, 45 patients with non-functioning adenoma, and 40 healthy subjects were enrolled in the study. Cloninger's Temperament and Character Inventory (TCI), Beck Depression Inventory, Beck Anxiety Inventory, and Rosenberg Self-Esteem Scale (RSES) were used to assess personality, depression, anxiety, and self-esteem.

Results: Depression score was higher in acromegaly and non-functioning adenoma groups than healthy controls. RSES scores were similar among the three groups. Regarding the scales of TCI, only novelty-seeking was significantly reduced in acromegaly and non-functioning adenoma than the control group. Pairwise comparisons revealed that the difference was due to the difference between acromegalic patients and controls. Scales of TCI were correlated with depression and anxiety in patients with acromegaly and nonfunctioning adenoma but not in healthy controls.

Conclusion: This study showed that novelty-seeking was reduced in patients with acromegaly. Both the hormonal lack and excess and structural changes can lead to cognitive and personality changes in acromegaly. More studies are needed to be carried out about personality characteristics in pituitary diseases.

THE FREQUENCY AND DETERMINANTS OF HBA1C VARIABILITY IN TYPE 2 DIABETIC PATIENTS

Mirac Vural Keskinler¹, Mumtaz Takir², Ozge Telci Caklili³, Aytekin Oguz¹ *Metab Syndr Relat Disord. 2021 Sep;19(7):372-377. doi: 10.1089/met.2020.0131. Epub 2021 Mar 29. PMID: 33780634 DOI: 10.1089/met.2020.0131*

Aim: Glycated hemoglobin (HbA1c) is an efficient and easy test to evaluate glycemic control of patients with type 2 diabetes (T2DM). This study aims to evaluate HbA1c variability and associated factors in patients with T2DM.

Methods: Four hundred four consecutive patients with T2DM who gave consent to participate and who were eligible were included. The inclusion criterion was presence of three or more HbA1c levels in 1 year. A change $\geq 0.5\%$ in HbA1c was identified as a significant variability in HbA1c in 1 year. Primary endpoint of the study was to identify the factors associated with HbA1c variability. Patients were grouped as (1) without variability, (2) one variability, and (3) more than one variability. Variability frequency and associated factors such as body mass index, smoking, and c-peptide value were assessed.

Results: There were 404 patients (45.3% male) with mean age 58.91 \pm 10.8 years. Thirty-four patients (8.4%) had no variability, 19 patients (4.7%) had one variability, and 351 patients (86.9%) had more than one variability. Patients only on insulin treatment and patients on both oral antidiabetic agents (OAD) and insulin had higher variability than patients only on OAD (P = 0.002; P < 0.01). Patients with variability had higher HbA1c levels than patients without variability (P < 0.01). A 1% increase in HbA1c had a 4.864-fold (95% confidence interval: 2.360-10.023) increased variability risk.

Conclusions: HbA1c variability is seen in 9 of 10 patients with T2DM and higher HbA1c values and poor glycemic control are associated with a higher risk of HbA1c variability.

CLINICAL RESEARCH OF INSULIN GLARGINE U300 BASAL-BOLUS THERAPY AND INSULIN DEGLUDEC/ ASPART CO-FORMULATION IN TYPE 2 DIABETES MELLITUS: A REAL WORLD EXPERIENCE

Savas Volkan Kisioglu,Ahmet Suat Demir,Damla Tufekci,Yasemin Emur Gunay,Hulya Coskun,Ozge Ucuncu,Irfan Nuhoglu,Mustafa Kocak,Serdar Karakullukcu,Halil Onder Ersoz https://doi.org/10.1111/ijcp.14377

Aims: Insulin degludec/aspart (IDegAsp) and insulin glargine U300 (IGlarU300) have recently emerged as popular newgeneration insulin analogues. The aim of this real-life study was to investigate the patient profiles in which IGlarU300 and IDegAsp were preferred and the insulin combinations after which each of them were mostly used and also to analyse the effect of these two insulin analogues on blood glucose regulation and hypoglycaemia.

Materials and Methods: The retrospective study included 174 patients that were switched from basal insulin, basalbolus insulin, or premixed insulin to IGlarU300 or IDegAsp due to uncontrolled blood glucose levels or history of hypoglycaemia. Hypoglycaemia, body weight, body mass index (BMI), fasting plasma glucose (FPG) and HbA1c levels over 3-month periods were evaluated for each patient.

Results: There were 84 and 90 patients in the IGlarU300 and IDegAsp groups, respectively. Body weight was similar in both groups. Baseline FPG and HbA1c levels in the IGlarU300 and IDegAsp groups were 9.0%, 175.5 mg/dL and 9.4%, 193.5 mg/dL, respectively. A significant decrease was found in FPG and HbA1c levels in both groups (138.5, 7.8 vs 141.5, 8.2; P < .001 for all). Moreover, a significant weight gain was observed in both groups (P < .05 for both). The prevalence of hypoglycaemia in both groups decreased significantly and consistently between months 1 and 9 (P < .001). At month 12, although this decrease continued in the IGlarU300 group (P = .013), no significant decrease was observed in the IDegAsp group (P = .057).

Conclusion:Both twice-daily IDegAsp \pm bolus insulin and IGlarU300 basal bolus insulin therapies are effective and safe treatment modalities.

LOSS-OF-FUNCTION VARIANTS IN SEMA3F AND PLXNA3 ENCODING SEMAPHORIN-3F AND ITS RECEPTOR PLEXIN-A3 RESPECTIVELY CAUSE IDIOPATHIC HYPOGONADOTROPIC HYPOGONADISM

Leman Damla Kotan #¹, Gaetan Ternier #², Aydilek Dagdeviren Cakir³, Hamdi Cihan Emeksiz⁴, Ihsan Turan¹, Gaspard Delpouve², Asli Derya Kardelen⁵, Bahar Ozcabi⁶, Emregul Isik⁷, Eda Mengen⁸, Esra Deniz P Cakir⁹, Aysegul Yuksel¹⁰, Sebahat Yilmaz Agladioglu¹¹, Semine Ozdemir Dilek¹, Olcay Evliyaoglu³, Feyza Darendeliler⁵, Fatih Gurbuz¹, Gamze Akkus¹², Bilgin Yuksel¹, Paolo Giacobini #¹³, A Kemal Topaloglu #¹⁴¹⁵ *Genet Med. 2021 Jun;23(6):1008-1016. doi: 10.1038/s41436-020-01087-5. Epub 2021 Jan 25. PMID: 33495532 DOI: 10.1038/s41436-020-01087-5*

Purpose: Idiopathic hypogonadotropic hypogonadism (IHH) is characterized by absent puberty and subsequent infertility due to gonadotropin-releasing hormone (GnRH) deficiency. IHH can be accompanied by normal or compromised olfaction (Kallmann syndrome). Several semaphorins are known potent modulators of GnRH, olfactory, and vomeronasal system development. In this study, we investigated the role of Semaphorin-3F signaling in the etiology of IHH.

Methods: We screened 216 IHH patients by exome sequencing. We transiently transfected HEK293T cells with plasmids encoding wild type (WT) or corresponding variants to investigate the functional consequences. We performed fluorescent IHC to assess SEMA3F and PLXNA3 expression both in the nasal region and at the nasal/forebrain junction during the early human fetal development.

Results: We identified ten rare missense variants in SEMA3F and PLXNA3 in 15 patients from 11 independent families. Most of these variants were predicted to be deleterious by functional assays. SEMA3F and PLXNA3 are both expressed along the olfactory nerve and intracranial projection of the vomeronasal nerve/terminal nerve. PLXNA1-A3 are expressed in the early migratory GnRH neurons.

Conclusion: SEMA3F signaling through PLXNA1-A3 is involved in the guidance of GnRH neurons and of olfactory and vomeronasal nerve fibers in humans. Overall, our findings suggest that Semaphorin-3F signaling insufficiency contributes to the pathogenesis of IHH.

CAPTURE: A MULTINATIONAL, CROSS-SECTIONAL STUDY OF CARDIOVASCULAR DISEASE PREVALENCE IN ADULTS WITH TYPE 2 DIABETES ACROSS 13 COUNTRIES

Ofri Mosenzon¹, Abdullah Alguwaihes², Jose Luis Arenas Leon³, Fahri Bayram⁴, Patrice Darmon⁵, Timothy M E Davis⁶, Guillermo Dieuzeide⁷, Kirsten T Eriksen⁸, Tianpei Hong⁹, Margit S Kaltoft⁸, Csaba Lengyel¹⁰, Nicolai A Rhee¹¹, Giuseppina T Russo¹², Shinichiro Shirabe¹³, Katerina Urbancova¹⁴, Sergio Vencio¹⁵, CAPTURE Study Investigators

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Background: There is a paucity of global data on cardiovascular disease (CVD) prevalence in people with type 2 diabetes (T2D). The primary objective of the CAPTURE study was to estimate the prevalence of established CVD and its management in adults with T2D across 13 countries from five continents. Additional objectives were to further characterize the study sample regarding demographics, clinical parameters and medication usage, with particular reference to blood glucose-lowering agents (GLAs: glucagon-like peptide-1 receptor agonists and sodium-glucose co-transporter-2 inhibitors) with demonstrated cardiovascular benefit in randomized intervention trials.

Methods: Data were collected from adults with T2D managed in primary or specialist care in Australia, China, Japan, Czech Republic, France, Hungary, Italy, Argentina, Brazil, Mexico, Israel, Kingdom of Saudi Arabia, and Turkey in 2019, using standardized methodology. CVD prevalence, weighted by diabetes prevalence in each country, was estimated for the overall CAPTURE sample and participating countries. Country-specific odds ratios for CVD prevalence were further adjusted for relevant demographic and clinical parameters.

Results: The overall CAPTURE sample included 9823 adults with T2D (n = 4502 from primary care; n = 5321 from specialist care). The overall CAPTURE sample had median (interquartile range) diabetes duration 10.7 years (5.6-17.9 years) and glycated hemoglobin 7.3% (6.6-8.4%) [56 mmol/mol (49-68 mmol/mol)]. Overall weighted CVD and atherosclerotic CVD prevalence estimates were 34.8% (95% confidence interval [CI] 32.7-36.8) and 31.8% (95% CI 29.7-33.8%), respectively. Age, gender, and clinical parameters accounted for some of the between-country variation in CVD prevalence. GLAs with demonstrated cardiovascular benefit were used by 21.9% of participants, which was similar in participants with and without CVD: 21.5% and 22.2%, respectively.

Conclusions: In 2019, approximately one in three adults with T2D in CAPTURE had diagnosed CVD. The low use of GLAs with demonstrated cardiovascular benefit even in participants with established CVD suggested that most were not managed according to contemporary diabetes and cardiology guidelines. Study registration NCT03786406 (registered on December 20, 2018), NCT03811288 (registered on January 18, 2019).

CLINICAL COURSE AND MANAGEMENT OF PEMBROLIZUMAB-ASSOCIATED ISOLATED ADRENOCORTICOTROPHIC HORMONE DEFICIENCY: A NEW CASE AND LITERATURE REVIEW

Seda Hanife Oğuz¹, Uğur Ünlütürk¹, Sercan Aksoy², Tomris Erbas¹ *Immunotherapy. 2021 Oct;13(14):1157-1163. doi: 10.2217/imt-2021-0061. Epub 2021 Aug 13. PMID: 34387129 DOI: 10.2217/imt-2021-0061*

Hypophysitis is rarely reported in patients receiving pembrolizumab-only immunotherapies. Since the clinical presentation is usually as isolated adrenocorticotrophic hormone (ACTH) deficiency, patients may be misjudged as having clinical symptoms due to cancer or chemotherapy. A 49-year-old male with laryngeal cancer applied to our clinic just after the tenth cycle of his pembrolizumab treatment, with weakness and nausea/vomiting. Serum morning cortisol and ACTH were 0.47 mcg/dl and 10.1 pg/ml, respectively; the remaining anterior pituitary hormone levels were normal. Pituitary MRI revealed mild glandular enlargement and loss of posterior pituitary bright-spot. All symptoms and signs improved with low-dose prednisolone. This is the second reported case of pembolizumab-associated isolated ACTH deficiency having abnormal pituitary MRI findings as we have reviewed all reported cases in the literature.

PATIENTS WITH ACROMEGALY MIGHT NOT BE AT HIGHER RISK FOR DOPAMINE AGONIST-INDUCED IMPULSE CONTROL DISORDERS THAN THOSE WITH PROLACTINOMAS

Hande Mefkure Ozkaya¹, Serdar Sahin¹, Ozge Polat Korkmaz¹, Emre Durcan¹, Humeyra Rekali Sahin², Emir Celik³, Burc Cagri Poyraz⁴, Pinar Kadioglu⁵ Growth Horm IGF Res. 2020 Dec;55:101356.doi: 10.1016/j.ghir.2020.101356. Epub 2020 Sep 24. PMID: 33010581 DOI: 10.1016/j.ghir.2020.101356

Objective: To evaluate the prevalence of impulse control disorders (ICD) and psychiatric symptoms in patients with acromegaly receiving dopamine agonists (DA) in comparison with those with prolactinoma, nonfunctioning pituitary adenomas (NFA), and healthy controls (HC).

Design: Forty patients with acromegaly, 40 with prolactinoma, 38 with NFA, and 32 HCs were included. All patients and controls were evaluated using the revised version of the Minnesota Impulsive Disorders Interview (MIDI-R), Symptom Check List (SCL-90-R) questionnaire, Barratt Impulsiveness Scale (BIS-11), Beck Depression Inventory (BDI), and Beck Anxiety Inventory (BAI).

Results: We detected ICD associated with DAs in two patients with acromegaly (5%) and three patients (7.5%) with prolactinoma. All patients' symptoms resolved after discontinuation of the drug. While the mean DA dose was higher in patients with acromegaly than prolactinomas (p <0.05), no difference was detected in terms of ICD prevalence between two groups (p >0.05). SCL-90 depression and interpersonal sensitivity subscale positivity was higher in patients with NFA than HCs. Patients with prolactinoma had higher obsession and interpersonal sensitivity positivity and those with NFA had higher somatization, interpersonal sensitivity, and depression positivity as compared to patients with acromegaly (p < 0.05 for all).

Conclusions: Although DA dose was significantly higher in patients with acromegaly, there was no significant difference in the prevalence of DA-related ICD. The higher prevalence of positive screening in SCL-90 in patients with NFA in comparison to HCs supports the hypothesis that the presence of a pituitary adenoma per se might cause significant psychiatric symptoms.

THIOL/DISULFIDE HOMEOSTASIS AND ITS RELATIONSHIP WITH INSULIN RESISTANCE IN PATIENTS WITH ROSACEA

Suzan Demir Pektas¹, Nese Cinar², Gokhan Pektas³, Gulhan Akbaba², Ahmet Kara⁴, Hilal Semra Hancer⁵, Deniz Demircioglu Duman⁶, Salim Neselioglu⁷, Ozcan Erel⁷, Duygu Yazgan Aksoy⁸

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Background: Rosacea is a chronic inflammatory cutaneous disease that can be associated with cardiometabolic disorders. Oxidative stress is included in the pathogenesis of rosacea, and thiol-disulfide homeostasis (TDH) acts as antioxidants.

Objective: To evaluate the TDH and metabolic parameters in patients with rosacea.

Material and methods: A total of 42 rosacea patients and 50 controls participated in this prospective study. Demographic data, clinical entities, anthropometric measurements, and laboratory findings were recorded. Additionally, TDH was measured by an automated spectrophotometric method.

Results: Rosacea patients had greater body mass index values (27.9 \pm 5.2 kg/m² vs. 23 \pm 1.4 kg/m², p < 0.001), waist-hip ratios (0.87 \pm 0.1 vs. 0.77 \pm 0.8, p < 0.001), and insulin resistance (3.0 \pm 2.0 vs. 1.3 \pm 0.5, p < 0.001) compared with controls. Disulfide levels, the disulfide/native thiol ratio (DNTR), and the disulfide/total thiol ratio (DTTR) were increased (p < 0.05) in rosacea patients. Native thiol and total thiol levels and the native/total thiol ratio (NTTR) were decreased in rosacea patients (p < 0.05). Different rosacea subtypes had no effect on oxidative stress markers. The duration of illness and insulin resistance values significantly correlated with DNTR and DTTR in the rosacea group (p < 0.05).

Conclusion: Rosacea has a metabolic milieu with increased oxidative stress and insulin resistance.

THE RELATIONSHIP AMONG ANDROGENS, INSULIN RESISTANCE AND GHRELIN POLYMORPHISMS IN POST-ADOLESCENT MALE PATIENTS WITH SEVERE ACNE VULGARIS

Suzan Demir Pektas¹, Nese Cinar², Deniz Demircioglu Duman³, Ahmet Kara⁴, Janserey Batu⁵, Sevim Karakas-Celik⁶, Duygu Yazgan Aksoy⁷ Postepy Dermatol Alergol. 2020 Oct;37(5):800-809. doi: 10.5114/ada.2020.100492. Epub 2020 Nov 7. PMID: 33240024 PMCID: PMC7675091 DOI: 10.5114/ ada.2020.100492

Introduction: Ghrelin has anti-inflammatory and immunomodulatory activities. Data about the role of ghrelin and ghrelin polymorphisms in the development of acne vulgaris in post-adolescent male patients are limited.

Aim: To evaluate the role of serum androgens, insulin resistance, ghrelin and ghrelin polymorphisms in severe acne vulgaris.

Material and methods: Thirty-five post-adolescent male patients with a mean age of 28.0 ± 5.4 years and 33 age-and BMI-matched controls were enrolled. Serum androgens, lipids, insulin sensitivity parameters and ghrelin levels were determined. The PCR method was used for *GHRL* polymorphisms (rs27647, rs696217 and rs34911341 genotypes).

Results: Patients had similar anthropometric measures to controls, except a significantly higher WHR in patients (0.92 ± 0.06 vs. 0.86 ± 0.08 , p < 0.05). Also, FPG, HOMA-IR values, lipid profile and serum androgen levels were similar. Interestingly, patients had significantly lower ghrelin levels than controls (4.5 \pm 5.8 vs. 101.2 \pm 86.5 pg/ml, p < 0.001). The frequencies of rs696217 and rs34911341 genotypes were similar whereas the distribution of rs27647 alleles was significantly different between the groups (p < 0.05). GA and GG genotypes of GHRL rs27647 polymorphism indicated an increased risk of developing acne vulgaris (OR = 11.156, 95% CI: 2.864-43.464, OR = 5.312, 95% CI: 1.269-22.244, respectively; p < 0.05). Patients with rs27647-AA polymorphism had significantly lower GAGS scores than other groups (AA genotype 6.7 ± 14.1 vs. GA genotype 24.6 ± 15.7 and GG genotype 19.4 ± 17.9 , p < 0.001). None of the polymorphisms had a significant effect on metabolic parameters, insulin sensitivity and serum ghrelin levels.

Conclusions: Decreased ghrelin levels and GA and GG genotypes of *GHRL* gene rs27647 polymorphism may have a role in the pathogenesis of acne vulgaris.

THE ROLE OF OBESITY IN PREDICTING THE CLINICAL OUTCOMES OF COVID-19

Serdar Sahin¹², Havva Sezer²³, Ebru Cicek⁴, Yeliz Yagız Ozogul⁴, Murat Yildirim⁴, Tevhide Betul Icli⁴, Ozge Polat Korkmaz¹², Emre Durcan¹², Cem Sulu¹², Kayra Somay³, Bahar Bekdemir³, Sermin Borekci⁵, Dilek Yazici²³, Oguzhan Deyneli²³, Onder Ergonul⁶, Fehmi Tabak⁷, Yalim Dikmen⁸, Hande Mefkure Ozkaya¹, Mustafa Sait Gonen¹, Taner Damci¹², Hasan Ilkova¹², Volkan Demirhan Yumuk¹²

Obes Facts. 2021;14(5):481–489. doi: 10.1159/000517180. Epub 2021 Aug 5. PMID: 34352797 PMCID: PMC8450845 DOI: 10.1159/000517180

Introduction: The aim of this was to describe the predictors of mortality related to COVID-19 infection and to evaluate the association between overweight, obesity, and clinical outcomes of COVID-19.

Methods: We included the patients >18 years of age, with at least one positive SARS-CoV-2 reverse transcriptase-polymerase chain reaction. Patients were grouped according to body mass index values as normal weight <25 kg/m2 (Group A), overweight from 25 to <30 kg/m2 (Group B), Class I obesity 30 to <35 kg/m2 (Group C), and \geq 35 kg/m2 (Group D). Mortality, clinical outcomes, laboratory parameters, and comorbidities were compared among 4 groups.

Results: There was no significant difference among study groups in terms of mortality. Noninvasive mechanical ventilation requirement was higher in group B and D than group A, while it was higher in Group D than Group C (Group B vs. Group A [p = 0.017], Group D vs. Group A [p = 0.001], and Group D vs. Group C [p = 0.016]). Lung involvement was less common in Group A, and presence of hypoxia was more common in Group D (Group B vs. Group A [p = 0.025], Group D vs. Group A [p < 0.001], Group D vs. Group B [p = 0.006], and Group D vs. Group C [p =0.014]). The hospitalization rate was lower in Group A than in the other groups; in addition, patients in Group D have the highest rate of hospitalization (Group B vs. Group A [p < 0.001], Group C vs. Group A [p < 0.001], Group D vs. Group A [p < 0.001], Group D vs. Group B [p < 0.001], and Group D vs. Group C [p = 0.010]).

Conclusion: COVID-19 patients with overweight and obesity presented with more severe clinical findings. Health-care providers should take into account that people living with overweight and obesity are at higher risk for COVID-19 and its complications.

THE EFFECT OF SERUM LIPID LEVELS ON PERIPHERAL BLOOD HEMATOPOIETIC STEM CELL LEVELS

Ilgin Yildirim Simsir¹, Ayhan Donmez², Ceyda Kabaroglu³, Irfan Yavasoglu⁴, Gunes Basol³, Ayşe Gungor², Melda Comert Ozkan², Fusun Saygili⁵, Zahit Bolaman⁴, Murat Tombuloglu²

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Introduction: There are limited numbers of available retrospective studies on various hematological diseases treated with stem cell mobilization therapy. In the present study, we aimed to demonstrate the effects of serum lipid levels on peripheral blood CD34+ (PBCD34+) cell counts as well as the changes in serum lipid levels during stem cell mobilization process.

Method: PBCD34+ cell counts were compared between hypercholesterolemic patients and healthy individuals. Additionally, total cholesterol (TChol), LDL-cholesterol (LDL-C), HDL-cholesterol (HDL-C), and triglyceride (TG) levels were measured from healthy donors who underwent stem cell mobilization, at different time points (prior to filgrastim [phase 1], prior to apheresis [phase II], and the first week following apheresis [phase III].

Results: In the hypercholesterolemia group, the PBCD34+ cell count was found to be higher among patients with elevated LDL-C ($2.6 \pm 0.35/\mu$ L vs. $1.7 \pm 0.17/\mu$ L, p = 0.003) and TChol ($2.6 \pm 0.34/\mu$ L vs. $1.7 \pm 0.14/\mu$ L, p = 0.006) in comparison to the healthy controls. In the mobilization group, phase II HDL-C levels ($35.3 \pm 2.8 \text{ mg/dL}$) were found to be lower than both phase I ($45.6 \pm 2.1 \text{ mg/dL}$) and phase III ($44.5 \pm 2.6 \text{ mg/dL}$) (p = 0.007). Phase II TChol levels ($183.5 \pm 10.0 \text{ mg/dL}$) were lower than both phase I ($216.8 \pm 8.5 \text{ mg/dL}$) and phase III ($212.2 \pm 8.4 \text{ mg/dL}$) (p = 0.02). At phase II, there was an inverse correlation between PBCD34+ cell count and HDL-C (r = -0.57, p = 0.003).

Discussion: Our results indicate that, while increased LDL-C level is the determinant of baseline PBCD34+ cell count, reduced HDL-C is the determinant of PBCD34+ cell count during mobilization process.

BETATROPHIN LEVELS ARE RELATED TO THE EARLY HISTOLOGICAL FINDINGS IN NONALCOHOLIC FATTY LIVER DISEASE

Alper Sonmez¹, Teoman Dogru², Cemal Nuri Ercin³, Halil Genc⁴, Gurkan Celebi³, Hasan Gurel⁵, Serkan Tapan⁶, Ali Fuat Cicek⁷, Cem Barcin⁸, Cem Haymana⁹, Ali Kirik¹⁰, Manfredi Rizzo¹¹¹²

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Betatrophin, a liver hormone, regulates glucose and lipid metabolism. We investigated the betatrophin levels in nonalcoholic fatty liver disease (NAFLD) and searched for any relationship with histological severity and metabolic parameters. Fifty males with NAFLD [Nonalcoholic Steatohepatitis (NASH) (n = 32); non-NASH (n = 18)] and 30 healthy controls were included. Plasma betatrophin was measured by ELISA method. Insulin sensitivity was assessed by HOMA-IR index. Histological features were scored by the semi quantitative classification and combined as the NAFLD activity score (NAS). Betatrophin levels in the non-NASH group were significantly higher than the controls. Betatrophin was positively correlated to the age, waist circumference, total cholesterol, triglycerides, LDL cholesterol, glucose, insulin, HOMA-IR index and gamma glutamyl transpeptidase levels, and negatively correlated to the steatosis and NAS. In the stepwise linear regression analysis, the triglyceride ($\beta = 0.457, p < 0.001$), glucose ($\beta = 0.281, p =$ 0.02) and NAS ($\beta = -0.260$, p = 0.03) were the independent determinants of betatrophin. Betatrophin levels are higher in the early stages of NAFLD and tend to decrease when the disease progresses. This could be an important preliminary mechanistic finding to explain the increased frequency of glucose intolerance during the course of NAFLD.

INVESTIGATING ADAMTS7 AND ADAMTS12 LEVELS IN PREDIABETIC AND TYPE 2 DIABETIC PATIENTS

Mercan Taştemur¹, Selvihan Beysel², Sema Hepşen³, Sanem Öztekin¹, Erman Çakal³, İbrahim Akdağ¹, Mehmet Yıldız¹ Biomark Med. 2021 Jun;15(10):753-760. doi: 10.2217/bmm-2020-0161. Epub 2021 Jun 25, PMID: 34169731 DOI: 10.2217/bmm-2020-0161

Background: This study aims to investigate the role of ADAMTS7 and ADAMTS12 on atherosclerosis and inflammation in prediabetic and diabetic patients.

Patients & methods: Serum ADAMTS7 and ADAMTS12 levels were compared with the atherosclerotic and inflammatory markers in diabetic (n = 65, female 30.9%, mean age = 53 years), prediabetic (n = 55, female 36.6%, mean age = 49 years) and control groups (n = 55, females 32.5%, mean age = 49 years). Serum ADAMTS levels were determined by a human enzyme-liked immunoassay.

Results: In terms of ADAMTS7, there was no significant difference between diabetic, prediabetic and control groups (50.93, 44.34, 59.07, respectively; p > 0.05). ADAMTS12 is lower in diabetics (p < 0.05), whereas it is similar in prediabetics and controls (14.53, 20.76, 25.05, respectively; p > 0.05). ADAMTS7 and ADAMTS12 levels did not differ in diabetic nephropathy, retinopathy and neuropathy (p > 0.05).

Conclusion: While ADAMTS12 was significantly lower in diabetics and prediabetics, ADAMTS7 and ADAMTS12 were not related to diabetic complications (nephropathy, retinopathy and neuropathy).

EFFECTS OF INCREASED PHYSICAL ACTIVITY AND/ OR WEIGHT LOSS DIET ON SERUM MYOKINE AND ADIPOKINE LEVELS IN OVERWEIGHT ADULTS WITH IMPAIRED GLUCOSE METABOLISM

Özlem Tok¹, Savaş Volkan Kişioğlu², Halil Önder Ersöz², Bahittin Kahveci³, Zeynep Göktaş⁴

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Aim: The purpose of this study was to investigate the changes in serum irisin, fibroblast growth factor-21 (FGF21), visfatin, follistatin like protein-1 (FSTL1), and meteorin-like protein (Metrnl) levels in response to increased physical activity and/or diet interventions in overweight subjects with impaired glucose metabolism (IGM).

Methods: A total of 60 subjects (BMI > 25.0 kg/m²) with IGM were recruited in this single-centered interventional study. Twelve subjects dropped out during the study and the study was completed with 48 patients. Patients were divided into two groups as diet only (DI, n = 24) and diet and physical activity intervention (DPA, n = 24). Patients in DI group received a diet program while DPA group received a diet combined with a physical activity intervention for 12 weeks. Additional 24 healthy subjects were recruited to compare the baseline levels of proteins. Serum protein levels, anthropometric measurements, and biochemical parameters were assessed.

Results: Irisin, FGF21, visfatin, and FSTL1 levels significantly decreased in both groups after 12-week intervention (p < 0.001). However, there were no differences in protein levels between DI and DPA groups (p > 0.05). Likewise, the total change in weight was similar in both DI (-4.35 kg) and DPA (-4.85 kg) groups (p > 0.05). A 5% reduction in initial body weight with DPA therapy resulted in a stronger correlation between the changes in irisin, visfatin, and FSTL1 levels and fasting glucose and HbA1c levels.

Conclusions: These results demonstrate that serum irisin, FGF21, visfatin, and FSTL1 levels decreased in response to weight loss interventions. Weight loss induced by DI or DPA therapies had similar lowering effects on these proteins in subjects with IGM, and these myokines might be related to glucose metabolism biomarkers.

SONOELASTOGRAPHIC EVALUATION OF RECURRENT THYROID NODULES IN PATIENTS WITH OPERATED RECURRENT NODULAR GOITERS

Hakan Yilmaz¹, Canan Akkus², Nurullah Damburaci³, Zelal Adibelli², Cevdet Duran⁴

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Alterations in neck anatomy after thyroid surgery and post-operative fibrosis may be misleading by causing sonoelastographic changes in recurrent tissues in patients with recurrent nodular goiter and so may result in unnecessary biopsies or surgical procedures. Here, the aim was to examine thyroid sonoelastography values in patients developing a recurrence and presenting with recurrent nodular goiter with benign cytology after total or near-total thyroidectomy (T/N-TT). Twenty-nine nodules from 22 patients with a recurrence after T/N-TT whose biopsies were found to be benign constituted the patients, and 23 nodules from 23 participants among the non-operated patients having solitary or multiple thyroid nodules and with age, gender and body mass index values similar to those of the patients constituted our controls. Shear-wave velocity (SWV) values were measured. Average elapsed time after T/N-TT was 11.82 (4:25) y. No difference was detected between the groups in terms of localization and sonographic structures of the nodules. Nodule SWV values were higher in the operated recurrent nodular goiter group than in the controls (2.93 \pm 0.87 m/s vs. 2.43 \pm 0.33 m/s, respectively, p = 0.011). Because SWV values are high in operated recurrent nodular goiter patients, the utilization of reference sonoelastography values in those with unoperated goiter may yield misleading results in the differentiation of benign and malignant lesions.

TIME TO GIVE UP TRADITIONAL METHODS FOR THE MANAGEMENT OF GASTROINTESTINAL NEUROENDOCRINE TUMOURS

Ahmet Yozgat¹, Murat Kekilli², Mustafa Altay³

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Neuroendocrine tumors (NETs) are a rare and heterogeneous disease group and constitute 0.5% of all malignancies. The annual incidence of NETs is increasing worldwide. The reason for the increase in the incidence of NETs is the detection of benign lesions, incidental detection due to the highest use of endoscopic and imaging procedures, and higher recognition rates of pathologists. There have been exciting developments regarding NET biology in recent years. Among these, first of all, somatostatin receptors and downstream pathways in neuroendocrine cells have been found to be important regulatory mechanisms for protein synthesis, hormone secretion, and proliferation. Subsequently, activation of the mammalian target of rapamycin pathway was found to be an important mechanism in angiogenesis and tumor survival and cell metabolism. Finally, the importance of proangiogenic factors (platelet-derived growth factor, vascular endothelial growth factor, fibroblastic growth factor, angiopoietin, and semaphorins) in the progression of NET has been determined. Using the combination of biomarkers and imaging methods allows early evaluation of the appropriateness of treatment and response to treatment.

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TÜRKİYE ENDOKRİNOLOJİ VE METABOLİZMA DERNEĞİ BÜLTENİ

KİTAP BÖLÜMÜ

Endokrin Sistem Tümörleri
 Editör: Ali Murat Sedef
 Bölüm 12 – Tiroid Kanserlerinin Postoperatif Endsokrinolojik Takibi
 Elif Tutku Durmuş
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Covid-19 ve Kanser Editör: Ali Murat Sedef – Baran Akagündüz Bölüm 30-Covid-19 Pandemisinde Tiroid Kanserlerinde Hasta Yönetimi <u>Elif Tutku Durmuş</u> ISBN: 9786257496377

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