CLINICAL RESEARCH ARTICLES

1 Lipopolysaccharide-Induced VEGF Production and Ambient Oxidative Stress in Type 2 Diabetes
Kenneth Anthony Earle, Karima Zitouni, and Jaffar Nourooz-Zadeh
Précis: We investigated whether the redox milieu was related to stimulated VEGF production and how this varied between ethnic groups with T2DM with different risks of developing progressive kidney disease.

P 7 Pheochromocytoma in Children and Adolescents With Multiple Endocrine Neoplasia Type 2B
Angeliki Makri, Srivandana Akshintala, Claudia Derse-Anthony, Jaydira Del Rivero, Brigitte Widemann, Constantine A. Stratakis, John Glod, and Maya Lodish
Précis: We described the development of PHEO in 8 pediatric MEN2B patients and found that it may develop earlier than the screening-recommended age of 11; however, it is likely clinically nonsignificant.

21 Ghrelin Reduces TNF-α-Induced Human Hepatocyte Apoptosis, Autophagy, and Pyroptosis: Role in Obesity-Associated NAFLD
Silvia Ezquerro, Fátima Mocha, Gema Frühbeck, Rocío Guzmán-Ruiz, Víctor Valentí, Carmen Mugueta, Sara Becerril, Victoria Catalán, Javier Gómez-Ambrosi, Camilo Silva, Javier Salvador, Inmaculada Colina, María M. Malagón, and Amaia Rodríguez
Précis: Ghrelin acts as a survival factor by reducing TNF-α-induced apoptosis, autophagy, and pyroptosis mediated by HMGB1 in human hepatocytes, and thus prevents the progression of NAFLD to NASH.

P 41 Thyroid Cancer and Benign Nodules After Exposure In Utero to Fallout From Chernobyl
Maureen Hatch, Alina V. Brenner, Elizabeth K. Cahoon, Vladimir Drozdovitch, Mark P. Little, Tatiana Bogdanova, Victor Shpak, Elena Bolshova, Galyna Zamotayeva, Galyna Terekhova, Evgeniy Shelkovoy, Viktoria Klochkova, Kiyoihiko Mabuchi, and Mykola Tronko
Précis: We studied a cohort in Ukraine exposed prenatally to I-131 in fallout from Chernobyl and found a suggestive increase in thyroid cancer and a significant association with risk of large benign nodules.

49 Vitamin D and Tissue-Specific Insulin Sensitivity in Humans With Overweight/Obesity
Adriyan Pramono, Johan W. E. Jocken, Yvonne P. G. Essers, Gijs H. Goossens, and Ellen E. Blaak
Précis: Plasma vitamin D metabolites were not related to tissue-specific insulin sensitivity in humans who are overweight/obese. However, AT VDR mRNA was negatively associated to AT insulin sensitivity.

P = Pediatrics
Type 2 Diabetes in Neuroendocrine Tumors: Are Biguanides and Statins Part of the Solution?
Aura D. Herrera-Martínez, Sergio Pedraza-Arevalo, Fernando L-López, Manuel D. Gañete, Maria A. Gámez-Moreno, Justo P. Castañó, and Raúl M. Luque

Précis: Metformin reversed clinical and molecular changes in patients with T2DM and NETs. Biguanides and statins altered aggressiveness features (e.g., proliferation, apoptosis, etc.) in NET cells.

Determination of Pubertal Status in Youths With Type 1 Diabetes Using Height Velocity and Trajectories
Jia Zhu, Lisa K. Volkening, and Lori M. Laffel

Précis: Height velocity and growth chart trajectory provided data for pubertal status assignments in 123 youths with type 1 diabetes over 2 years with 87% sensitivity compared with clinical Tanner staging.

β-Cell Dedifferentiation in Patients With T2D With Adequate Glucose Control and Nondiabetic Chronic Pancreatitis
Jiajun Sun, Qicheng Ni, Jing Xie, Min Xu, Jun Zhang, Jie Kuang, Yanqiu Wang, Guang Ning, and Qidi Wang

Précis: A considerable proportion of dedifferentiated cells were detected in islets from type 2 diabetes with adequate glucose control and nondiabetic chronic pancreatitis.

Reducing the Number of Unnecessary Thyroid Biopsies While Improving Diagnostic Accuracy: Toward the “Right” TIRADS
Giorgio Grani, Livia Lamartina, Valeria Ascoli, Daniela Bosco, Marco Biffoni, Laura Giacomelli, Marianna Maranghi, Rosa Falcone, Valeria Ramundo, Vito Cantisani, Sebastiano Filetti, and Cosimo Durante

Précis: Five sonographic systems were used to risk stratify 502 thyroid nodules prior to biopsy. Of the biopsies, 17.1% to 53.4% were classified as deferrable, with false-negative rates of 2.2% to 4.1%.

Lung Metastasis in Pediatric Thyroid Cancer: Radiological Pattern, Molecular Genetics, Response to Therapy, and Outcome
Ali S. Alzahrani, Mshael Alsuailem, Yosra Moria, Reem Almutairi, Metib Alotaibi, Avaniphyrum Kannan Murugan, Ebtesam Oasem, Balgees Alghamdi, and Hindi Al-Handi

Précis: In pediatric TC, lung metastases usually present as nodules < 1 cm. Known single point mutations are rare. Biochemical response to iodine-131 is substantial but complete structural resolution is rare.

Fasted High-Intensity Interval and Moderate-Intensity Exercise Do Not Lead to Detrimental 24-Hour Blood Glucose Profiles
Sam N. Scott, Matt Cocks, Rob C. Andrews, Parth Narendran, Tejpal S. Purewal, Daniel J. Cuthbertson, Anton J. M. Wagenmakers, and Sam O. Shepherd

Précis: Fasted high-intensity interval training and moderate-intensity continuous exercise are not associated with a detrimental 24-hour blood glucose profile in people with type 1 diabetes.

The Natural History of Adrenal Insufficiency in X-Linked Adrenoleukodystrophy: An International Collaboration
Irene C. Huffnagel, Fiza K. Laheji, Razina Aziz-Bose, Nicholas A. Tritos, Rose Marino, Gabor E. Linthorst, Stephan Kemp, Marc Engelen, and Florian Eichler

Précis: The risk for adrenal insufficiency in male patients with X-linked ALD is time-dependent and highest in early childhood. Age-dependent follow-up of the adrenal function is indicated.

Sex Differences in Glucose and Fatty Acid Metabolism in Asians Who Are Nonobese
Zhiling Chan, Yu Chung Chooi, Cherlyn Ding, John Choo, Suresh Anand Sadananthan, Navin Michael, S. Sendhil Velan, Melvin Leow, and Faidon Magkos

Précis: Asian women who are nonobese have better glucose tolerance than men, with no differences in muscle insulin sensitivity or insulin secretion, pointing to sexual dimorphism in hepatic insulin action.

Reduced Insulin Receptor Expression and Altered DNA Methylation in Fat Tissues and Blood of Women With GDM and Offspring
Raffael Ott, Kerstin Melchior, Jens H. Stupin, Thomas Ziska, Karen Schellong, Wolfgang Henrich, Rebecca C. Rancourt, and Andreas Plagemann

Précis: SAT and VAT samples of patients with gestational diabetes had significantly lower levels of insulin receptor mRNA and protein expression, as well as differential DNA methylation.
150 Reduction of Total Brain and Cerebellum Volumes Associated With Neuronal Autoantibodies in Patients With APECED
Antonella Meloni, Giulia Corda, Luca Saba, Gian-Luca Ferri, Stefano Mariotti, and Cristina Cocco
Précis: Patients with APECED had smaller cerebellum and gray matter volumes, with a ventricular enlargement and a total cerebrospinal fluid increase, all associated (in 11 of 14) with brain neuron AutoAbs.

163 Glucose-Mediated Glucose Disposal at Baseline Insulin Is Impaired in IFG
Mariam Alatrach, Christina Agyin, Rucha Mehta, John Adams, Ralph A. DeFronzo, and Muhammad Abdul-Ghani
Précis: The present study has demonstrated that total body glucose disposal during the fasting state is not affected by the fasting plasma insulin concentration and is decreased in subjects with IFG.

172 Angiopoietin-Like Protein 2 Promotes the Progression of Diabetic Kidney Disease
Toshihisa Ishii, Fumihiko Furuya, Kazuya Takahashi, Miho Shikata, Takeyuki Takamura, Hidetoshi Kobayashi, Asako Miyazaki, Jun Morinaga, Kazutoyo Terada, Yuichi Oike, Eiichiro Kanda, and Kenichiro Kitamura
Précis: ANGPTL2 regulates podocyte function and contributes to the development and progression of albuminuria. Serum ANGPTL2 levels might be associated with progressive DKD.

181 Postprandial Insulin Response and Clearance Among Black and White Women: The Federal Women’s Study
Stephanie T. Chung, Mirella Galvan-De La Cruz, Paola C. Aldana, Lilian S. Mabundo, Christopher W. DuBose, Anthony U. Ozuurukie, Mary Walter, Ahmed M. Gharib, Amber B. Courville, Arthur S. Sherman, and Anne E. Sumner
Précis: A greater postprandial insulin response, relative to glucose, in black compared with white women was associated with lower insulin clearance but not increased insulin secretion.

193 Glucagon Levels During Short-Term SGLT2 Inhibition Are Largely Regulated by Glucose Changes in Patients With Type 2 Diabetes
Per Lundkvist, Maria J. Pereira, Prasad G. Kamble, Petros Katsogiannos, Anna Maria Langkilde, Russell Esterline, Eva Johnsson, and Jan W. Eriksson
Précis: Single doses of the SGLT2 inhibitor dapagliflozin were given, followed by isoglycemic clamps vs saline infusions in patients with T2D. Glucagon levels were largely dependent on changes in glycemia.

202 Effects of Glucagon-Like Peptide-1 Receptor Agonists on Hypothalamic-Pituitary-Adrenal Axis in Healthy Volunteers
Bettina Winzeler, Ismael da Conceiç~ao, Julie Refardt, Clara O. Sailer, Gilles Dutilh, and Mirjam Christ-Crain
Précis: The influence of a prolonged treatment with GLP-1 receptor agonists on HPA axis was assessed in healthy volunteers. No activation of the axis through GLP-1 was found.

COMMENTARIES

13 A Call to Action: Pregnant Women In-Deed Require Vitamin D Supplementation for Better Health Outcomes
Michael F. Holick
Précis: The benefit of vitamin D consumption outweighs the risks. This commentary describes in detail the health benefits of taking vitamin D while pregnant.

17 The Short Synacthen Test and Its Utility in Assessing Recovery of Adrenal Function in Patients With Central Adrenal Insufficiency
Mark Sherlock and Paul M. Stewart
Précis: The short synacthen test is useful in assessing recovery of adrenal function in patients with central adrenal insufficiency.

209 Can We Link Thyroid Status, Energy Expenditure, and Body Composition to Management of Subclinical Thyroid Dysfunction?
Dorina Ylli and Leonard Wartofsky
Précis: We discuss the study of Samuels et al., focusing on the effect that levothyroxine treatment has on energy expenditure and body composition in subclinical hypothyroidism.
WITHDRAWN: Glucose-Dependent Insulinotropic Polypeptide Increases Blood Flow in Adipose Tissue of Humans by Recruiting Capillaries

Précis: The effect of GIP on recruitment of capillaries in adipose tissue was studied in humans. Capillaries are recruited simultaneously with increased adipose tissue blood flow in response to GIP.