

classify them as per the ADA. Non-diabetic CF patients performed 3-day CGM, forced expiratory volume in the first second (FEV1), BMI and OGTT. All tests except for CGM were then reassessed after a long follow-up. The WHO's 2006 curve was used to calculate the z scores for individuals ≤ 19 yo and WHO cut-off values for >19 yo. Oral corticoid use during data collection, pregnancy and solid organ transplantation were exclusion criteria. **Results:** Thirty-nine patients were recruited and 34 completed an average of 3.1 years (± 0.51) follow-up. No clinical or laboratory variables could predict diabetes progression or hypoglycemic events. The cohort had an increase in mean BMI (17.80 ± 3.65 vs 18.36 ± 3.49 ; $p=0.025$) and a reduction in mean FEV1 ($66.91 \pm 25.79\%$ vs $56.32 \pm 29.57\%$; $p=0.001$) between the two evaluations. Patients who developed diabetes showed statistically significant worse FEV1 in the end of the follow-up (22.67 ± 5 vs 59.58 ± 28.9 ; $p=0.041$), and lower BMI at both start (14.37 ± 1.23 vs 18.13 ± 3.65 ; $p=0.049$) and end (14.81 ± 0.66 vs 18.71 ± 3.46 ; $p=0.029$) of follow-up. A logistic regression of the effect of time adjusted for independent variables for progression to CFRD was conducted. A higher possibility of evolution among participants with IGT (odds ratio [OR] 21.67; 95% confidence interval [CI] 7.03-67.36; $p<0.01$), and a lower possibility among participants with NGT (OR 1.84; 95% CI 1.06-3.19; $p=0.031$). **Conclusion:** CGM was not a useful tool to predict early diabetes onset in this population with the current cut-off values. However, the IGT group seems to be the riskiest group. The CF population has particular characteristics and may not have the same diagnostic criteria for DM as the non-CF population. More studies are necessary to determine the appropriate CGM cut-off values for CFRD.

Adrenal

ADRENAL CASE REPORTS III

Challenge in Diagnosing and Treating of Mediastinal Paraganglioma

Basil Alomair, Endocrinology Fellow¹, Anwar Jammah, Associate professor and consultant endocrinology².

¹King Khalid University hospital, Riyadh, Saudi Arabia, ²king saud university, Riyadh, Saudi Arabia.

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Challenge in Diagnosing and Treating of Mediastinal Paraganglioma Background Paraganglioma is a rare type of neuroendocrine tumor of the autonomic nervous system.¹ It is extremely rarely present in mediastinum (less than 2%).² **Case report** We report a 43 years-old woman, she was referred to our clinic with a history of high blood pressure (BP) for two years, accompanied by spells of sweating, headache, anxiety and palpitation. She was provisionally diagnosed with essential hypertension and was on four medications on maximum dose. The patient declined any previous surgical history, and review of systems was unremarkable. On examination, she was conscious and alert. Her vital signs were within normal limit. She reported to our clinic with home readings of BP ranging from 150-180 mmHg systolic

and 90-100 mmHg diastolic. Initial investigations of basic chemistry, renal profile, hormonal profile, aldosterone, and renin were within the normal range. Serum Normetanephrine was 800 ng/L (normal < 180 ng/L), 24 hours urine of Normetanephrine was 5205 microgram/24 hours (normal < 600 microgram/24 hours), and 24 hours urine Metanephrine was within normal. CT scan of the adrenal and MRI abdomen showed normal adrenal glands and no mass in the abdomen. MIBG scan was normal for the whole body. An unusual location of the Paraganglioma was suspected, and further images were carried on. A CT chest showed 4x4 cm posterior mediastinal mass in area of Aortopulmonary window, adherent to posterior wall of Aorta and pulmonary artery. Positron Emission Tomography (PET) scan was done prior to the surgery. Surgical resection of the mass with reconstruction of both pulmonary artery and pericardium was done without any complications. Moreover, histopathology confirmed the diagnosis of Paraganglioma. The patient was followed up with a CT scan six months post-operatively as an outpatient, along with 24-hour urine Metanephrine and Normetanephrine. All labs and imaging were normal. The patient had another Normetanephrine measurement twelve months later and it was normal. Now, she has been followed for seven years with no more symptoms and normal BP readings. All of her antihypertensive agents were discontinued. **Conclusion** We experience an unusual location of Paraganglioma at the mediastinum, which is representing less than 2% of all Paraganglioma. However, in the presence of characteristic of Paraganglioma symptoms, a thorough assessment should be carried out and such location of mediastinum should be suspected and investigated. **References:** 1. Institute NC. Pheochromocytoma and Paraganglioma Treatment (PDQ®)-Health Professional Version. <https://www.cancer.gov/types/pheochromocytoma/hp/pheochromocytoma-treatment-pdq>. Published 2019. Accessed February 1, 2020. 2. Paraganglioma: An Uncommon Cause of Mediastinal Mass. -PubMed - NCBI. <https://www.ncbi.nlm.nih.gov/pubmed/32000513>. Accessed February 1, 2020.

Neuroendocrinology and Pituitary

CASE REPORTS IN SECRETORY PITUITARY PATHOLOGIES, THEIR TREATMENTS AND OUTCOMES

Persistent vs Recurrent Cushing's Disease Diagnosed Four Weeks Post-Partum

Emily V. Nosova, MD, Joshua B. Bederson, MD, Khadeen Christi Cheesman, MD.

Icahn School of Medicine at Mount Sinai, New York, NY, USA.

SAT-LB49

Background: Cushing's disease (CD) recurrence in pregnancy has previously been described and is thought to be associated with predictable estradiol fluctuations during gestation. CD recurrence in the immediate post-partum period has been reported once, but never in a patient with documented dormant disease during pregnancy. **Clinical Case:** A 30 year old woman with recently diagnosed pre-diabetes presented with weight gain, dorsal hump, depression, oligomenorrhea, and lower extremity weakness.

Diagnostic tests were consistent with CD. Results included: three elevated midnight salivary cortisols: 0.33, 1.38 and 1.10 ug/dL (<0.010 - 0.090); 1-mg dexamethasone suppression test (DST) with cortisol 14 ug/dL (<1.8); elevated 24-hr urine cortisol 825 ug/24 hr (6-42); and ACTH 35 pg/mL (7.2-63.3). MRI of the pituitary gland revealed a left 4mm focal lesion. After transsphenoidal resection (TSA), day 1, 2, and 3 morning cortisol values were 18, 5, and 2 ug/dL, respectively. Pathology did not show a definitive pituitary neoplasm. She was rapidly titrated off hydrocortisone (HC) by six weeks post-resection. Her symptoms steadily improved. She resumed normal menses and conceived unexpectedly around 3 months post-TSA. She complained of severe fatigue in her late 2nd trimester. Given low 24-hr urine cortisol of 15 ug/24 hr at 36 weeks gestation, she was started on HC. She was induced at 40 weeks gestation for oligohydramnios and subsequently delivered a healthy baby boy. HC was discontinued immediately after delivery. Around four weeks post-partum she developed symptoms concerning for CD. Diagnostic tests showed elevated midnight salivary cortisol of 0.206 and 0.723 ug/dL and 24-hour urine cortisol of 400 ug/24 hr. MRI pituitary illustrated a 3mm adenoma in the left posterior gland which was thought to represent growth of residual tumor not clearly seen on post-op MRI. During repeat TSA, a discrete lesion was found and resected. Pathology confirmed corticotroph adenoma with MIB-1 < 3%. Post-operative day 1, 2, and 3 cortisol levels were 26, 10 and 2.8 ug/dL, respectively. She was tapered off HC within one month. Her symptoms improved only slightly and she continued to report weight gain, muscle weakness, and fatigue. Three months after repeat TSA, biochemical data showed 1 out of 2 midnight salivary cortisols elevated at 0.124 ug/dL and elevated urine cortisol of 76 ug/24 hr. MRI pituitary demonstrated a 3 x 5 mm left enhancement, concerning for residual or enlarged persistent tumor. **Conclusion:** We describe the first report of recurrent CD that was quiescent during pregnancy, and subsequently diagnosed in the immediate post-partum period. Treatment options for persistent or recurrent CD include aggressive surgical resection, radiation and/or medical therapy. In the context of additional family planning for this otherwise healthy, reproductive-age woman, ideal management options remain uncertain.

Reproductive Endocrinology

FEMALE REPRODUCTION: BASIC MECHANISMS

A Longitudinal Cohort Study of Serum Decorin Levels in Normal and Preeclamptic Pregnant Women

Maria Alejandra Cano – Bermúdez, BSc, Haiver Antonio Rodríguez – Navarro, MD, Julieth Daniela Buell – Acosta, MD, Jaidy Acosta – Álvarez, BSc, Mario Orlando Parra- Pineda, PhD, Arturo José Parada - Baños, MD, Jorge Eduardo Caminos, PhD, Maria Fernanda Garcés, BS, MSC, PhD.
Universidad Nacional de Colombia, Bogota, Colombia.

MON-LB5

A Longitudinal Cohort Study of Serum Decorin Levels in Normal and Preeclamptic Pregnant Women

Maria Alejandra Cano - Bermúdez BSc ¹, Haiver Antonio Rodríguez - Navarro MD ¹, Julieth Daniela Buell - Acosta MD ¹, Jaidy Acosta - Álvarez BSc ², Mario Orlando

Parra- Pineda PhD³, Arturo José Parada - Baños MD³, Jorge E. Caminos PhD ¹, Maria F. Garcés PhD ¹

¹Department of Physiology, School of Medicine, Universidad Nacional de Colombia, Bogotá, Colombia. ² Department of Morphology, School of Medicine, Universidad Nacional de Colombia, Bogotá, Colombia. ³ Department of Gynecology and Obstetrics, School of Medicine, Universidad Nacional de Colombia, Bogotá, Colombia

Background: Decorin (DCN) is a leucine-rich proteoglycan that regulates diverse cellular processes such as organization and stability of extracellular matrix, extracellular signaling by the maintenance of surface receptors and growth factors and enzymes activities. Additionally, DCN is an important mediator of inflammation, angiogenesis, trophoblast migration, placentation, tumor growth and autophagy. **Objective:** We aimed to evaluate DCN serum levels throughout gestation in a longitudinal cohort study in normal and preeclamptic pregnant women. **Methods:** In this nested case-control study design within a prospective cohort of 450 pregnant women, 50 healthy and 20 preeclamptic pregnant women were followed during each pregnancy trimester and three months post-partum. Likewise, healthy non-pregnant women in the follicular and luteal phase of their menstrual cycle were included (n = 20). Serum DCN concentrations were measured by ELISA. **Results:** In healthy non-pregnant women, DCN levels did not differ significantly between the two stages of the menstrual cycle. On the other hand, serum DCN levels decreased significantly in both healthy and preeclamptic pregnant women in each trimester of pregnancy when compared to non - pregnant women (p <0.001) and were re-established three months post-partum (p <0.001). Moreover, serum DCN levels were significantly lower in the second trimester of gestation in normal pregnant women (p <0.05). On the other hand, serum DCN was significantly higher in preeclamptic compared to healthy pregnant women in the third trimester of pregnancy (p <0.01). **Conclusion:** The present study found that DCN serum levels decreased significantly throughout pregnancy in healthy and preeclamptic pregnant women. Thus, low levels of DCN may play crucial physiological and pathological roles during pregnancy. DCN has been shown to inhibit different growth factors such as vascular endothelial growth factor (VEGF), transforming growth factor-beta (TGF-β) and platelet-derived growth factor (PDGF). Hence, low levels of DCN during pregnancy might play a critical role in the control of angiogenic process.

Tumor Biology

ENDOCRINE NEOPLASIA CASE REPORTS III

Hyperaldosteronism From Adrenal Adenoma in a Young Patient.

Francisco Javier Lopez Maldonado, MD¹, Angel Alfonso Mayorga León, MD¹, Alondra Rodriguez Gonzalez, MD², Eduardo Rafael León Milán, MD¹, Carlos Alfonso Morales Chinchillas, MD¹, Antonio Cruz Alvarado, RDN³, Jesus Alan Guardado, MD², Jose Fernando Montiel Castañeda, MD¹, Itzel Denisse Ramirez Bañales, MD¹, Jorge Leo Peterson, MD⁴.

¹Universidad Autónoma de Baja California, Facultad de Medicina, Mexicali, Mexico, ²Centro de Estudios Universidad Xochicalco, Mexicali, Mexico, ³Universidad Vizcaya de las Americas, Mexicali, Mexico, ⁴Universidad Autónoma de Guadalajara, Guadalajara, Mexico.