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Insulin Resistance Syndrome Associated with Subclinical Hypothyroidism in Postmenopausal Women

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modernization and perhaps one of the reason why they are ethnically more predispose to CVD. Hence RM could be considered clinically a better and non-invasion tool for medication.

Keywords: Resting Metabolism, CVD, lifestyle, indigenous population, India

Abbreviations: RM= resting metabolism; BMR= basal metabolic rate; CVD= cardiovascular disease

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0048

Gastric Abobotulinum Toxin A Injection - As an Effective Treatment for Obesity

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Abstract

Gastric Abobotulinum toxin A injection as an effective treatment for obesity Background: The first line treatment for obesity is diet, lifestyle change and pharmacotherapy. Next step is bariatric surgery. However, considering its side effects, we recommend to try Botox procedure as effective second line treatment. Objective: Aim of our study is to evaluate safety and effectiveness of endoscopic Abobotulinum toxin-A gastric injection for weight loss. Methods: Open label clinical trial of 32 obese and overweight women of reproductive age. Patients were evaluated before procedure and after 12 weeks. Initially mean BMI-34.8 kg/m² (28.2-40.5), 31%-overweight, 19%-class I and 50%-class II obese. Tests: Glucose, Insulin, HOMA-IR, TSH, FT4, Lipids, Coagulation, WBC, 25OHD, abdominal ultrasound, gastroduodenoscopy. After pharmacological treatment for comorbidities, patients received 1000 IU Abobotulinum toxin-A in antral, fundal and body parts of stomach. They were followed up after 12 weeks. Results were analyzed with IBM SPSS Statistics. Significance level p<0.05 was considered. Results: Patients with prior GIT disorders, such - GERD-69%, gastritis-60%, duodeno-gastral reflux 38%, ulcer-15%, reported no major GIT side effects after procedure. 87.5% of patients were Insulin resistant, 100% vitamin D deficient. After 12 weeks mean BMI reduced-31.6 kg/m² (24.5-35.9). Patients lost mean 10% of their initial weight (6.4-16.6%). Unexpectedly, patients with high insulin resistance and total cholesterol level, were prone to better weight loss results. Conclusion: We can suggest that endoscopic gastric Botox injection is effective and safe procedure in young overweight, class I-II obese women. GIT and Endocrine disorders are not contraindications for the procedure.

Keywords: Gastric Botox, Weigh loss, Obesity, Endoscopic Abobotulinum toxin A injection.

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0049

The Effect of Glycemic Control Achieved through Routine Follow-up on CA19-9 Levels

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Abstract

Carbohydrate antigen 19-9 (CA19-9) is a tumour-associated antigen but is also a marker of pancreatic tissue damage caused by diabetes. Patients with diabetes show elevated serum levels of CA19-9. Diabetes has been claimed to be a risk factor for pancreatic cancer. So, it is necessary to maintain a normal range of CA19-9 in diabetes patients. The study aims to investigate the effect of glycemic control on CA19-9 levels in diabetes patients. A prospective study was conducted among patients with diabetes, followed through a DTMS endorsed by a comprehensive diabetes care centre based in Kerala, India. Serum measurements of biochemical parameters and CA19-9 were performed. Chi-square or Likelihood Ratio test were used for univariate analysis. A Binary Logistic Regression model was used to identify the association between CA19-9 and other biochemical parameters. In 2971 patients with diabetes, we observed that 92% (n=2730) who has been followed up through DTMS has CA19-9 levels in the limit (0-37). The subjects were more likely to have a higher CA19-9 level (> 37) at HbA1c > 5.7% (Adjusted Odds Ratio, AOR = 9.463; 95% C. I = 7.745 to 11.562), Total Cholesterol < 135 (AOR = 1.71; 95% C.I = 1.262 to 2.315), and LDL > 100 (AOR = 1.715; 95% C.I = 1.063 to 2.765). CA19-9 levels are affected by glycemic outcomes in patients with type 2 diabetes. Stringent glycemic control achieved through routine follow-up is necessary to eliminate the risks associated with the CA19-9 levels.

Keywords: Diabetes; Carbohydrate antigen 19-9; CA 19-9; Glycemic Control

Abbreviations: Carbohydrate antigen- CA19-9; Diabetes Tele Management System- DTMS

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0050

Insulin Resistance Syndrome Associated with Subclinical Hypothyroidism in Postmenopausal Women

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Abstract

Background: Postmenopausal women are known to have a higher prevalence of the insulin resistance (IR) syndrome and subclinical hypothyroidism (SH). A major component of the IR syndrome is associated with type 2 diabetes mellitus, non-alcoholic fatty liver disease (NAFLD), dyslipidemia, obesity, hypertension in postmenopausal

women. Objective: The present study aims to assess symptoms of IR syndrome and SH in postmenopausal women. Methods: A total of 54 postmenopausal women have been examined and divided into 2 groups. Group I: 24 postmenopausal women with IR syndrome. Group II: 30 postmenopausal women with IR syndrome and SH. All subjects were clinically examined and evaluated for thyroid stimulation hormone (TSH), free thyroxine, HOMA-IR, fasting glycaemia, lipid metabolism. Thyroid and liver ultrasonography were performed with Doppler mode. Results: Thyroid ultrasound showed total thyroid volume of 12, 30±1,40 cm³ in 57% of patients with IR syndrome and SH and 9,50±1,22 cm³ in the group I. Liver ultrasonography showed hepatosis were present in 95% of postmenopausal women in group II and 90% in the group I. In the group I in 60% of females has dyslipidemia and 98% patients IR (p<0.001). The patients of the group II had 95% IR and all women dyslipidemia (p<0.001). Conclusion: this demonstrates that SH is frequent in patients with IR syndrome and indicates a potential cardiovascular risk due to the association of subclinical hypothyroidism, dislipidemia and suggests that NAFLD in postmenopausal women should be screened for thyroid function.

Keywords: insulin resistance, subclinical hypothyroidism, postmenopausal women, non-alcoholic fatty liver disease

Abbreviations: IR insulin resistance, SH subclinical hypothyroidism, NAFLD non-alcoholic fatty liver disease, TSH thyroid stimulation hormone

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0051

Early Detection of Insulin Resistance and Assorted Metabolic Dysfunctions through MicroRNA-141

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Abstract

Background: MicroRNAs (miRNAs) are non-coding RNAs. Previously we worked to investigate level of miRNA-141 in experimental animal model that were exposed with graded doses of nicotine as well we also found genetic variation among PPAR- γ , FTO, and ABCC8 genes with 25%, 24%, and 20% genetic variations in cardiometabolic smokers. Objective: present study was aimed to investigate level of miRNA-141 in human subjects designated as diabetic smokers and non-diabetic smokers. We further intended to explore conceivable interplay of miRNA-141 expression alteration with adipokine homeostasis and incidence of insulin resistance in participants. Methods: Serum was used to measure cotinine level and levels of leptin, adipokines, IL-6, MDA, HbA1c, insulin, G6PDH, hexokinase, and lipid profile. miRNA-141 expression level was determined in plasma. It was found that higher level of cotinine, higher glucose level were observed. Results: Interestingly this was found to be related with insulin resistance in smokers along with significantly increased HbA1c, leptin, IL-6, MDA and lipids levels, while, adiponectin, G6PDH, hexokinase and HDL levels were significantly lowered. Higher cotinine level and insulin resistance also impaired glucose tolerance and exhibited significant increase in miRNA-141 expression. This was escorted with serious inflammatory responses where

genetic expression of miRNA-141 was an accessible biomarker for metabolic disturbances with insulin resistance and glucose intolerance. Conclusion: Our results suggest that miRNA-141 can belonging to genomic biomarker category, play an important role in human glucose and insulin resistance, hence can be used to prevent assorted metabolic disorders particularly in young populations exposed to nicotine/tobacco.

Keywords: Keywords: Insulin resistance; metabolic disorder; glucose tolerance; smokers; MicroRNA

Abbreviations: Abbreviations: IL-6: Interleukin 6, MDA: Malondialdehyde, HbA1c: Glycated hemoglobin, G6PDH: Glucose-6-phosphate dehydrogenase

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0052

Efficacy and Safety of Acupuncture and Related Techniques for Type 2 Diabetes Mellitus: A Systematic Review of 21 Randomised Controlled Trials

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Abstract

Background: This systematic review aimed to evaluate the effects of acupuncture on hypoglycaemic outcomes. Methods: PubMed, Embase, Cochrane library, and ClinicalTrials.gov were searched up to July 5, 2020, to identify randomised controlled trials (RCTs) that enrolled patients with T2DM and compared acupuncture and related techniques combined with antidiabetic drugs to antidiabetic drugs alone. The primary outcomes were haemoglobin A1c (HbA1c) and fasting blood glucose (FBG). The secondary outcomes included two-hour blood glucose (2hBG), fasting insulin (FINS), homeostatic model assessment for insulin resistance (HOMA-IR), and acupuncture-related adverse events. Results: Twenty-one RCTs (n=1188) were included. The meta-analytic results showed that compared with the control group, the acupuncture group had greater reductions in FBG (mean difference -6.46 mg/dl, 95% CI -11.95 to -0.98; high-quality evidence) and HOMA-IR (MD -1.23, 95% CI -2.16 to -0.31; low-quality evidence) but comparable changes in HbA1c (MD -0.39%, 95% CI -0.84 to 1.61; very-low-quality evidence), 2hBG (MD -4.99 mg/dl, 95% CI -20.74 to 10.76; low-quality evidence), and FINS (MD -1.32 μ U/ml, 95% CI -3.76 to 1.12; low-quality evidence). No data on the incidence of diabetic complications were found. All acupuncture-related adverse events reported were mild. Conclusions: The current evidence suggest that acupuncture, as a complementary therapy to antidiabetic drugs, has a small but statistically significant ability to decrease FBG. Limited evidence shows that acupuncture may also improve insulin resistance. The effects of acupuncture on HbA1c, 2hBG, and FINS remain uncertain. Acupuncture is generally safe in patients with mild diabetes.

Keywords: Acupuncture; Type 2 diabetes mellitus; Systematic review; Meta-analysis