Free papers:
Poster presentations

Mycophenolate mofetil with dexamethasone as a treatment for Riedel's thyroiditis: A new approach

*Airi K[1], Fariduddin M[2], Masum TR[3], Ashraf K[4], Mustari M[5], Khan MA[6]

[1]Krishna Airi, Resident, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Shahbag, Dhaka, Bangladesh; [2]Md. Fariduddin, Professor, Department of Endocrinology, BSMMU, Shahbag, Dhaka, Bangladesh; [3]Tonmoy Reza Masum, Resident, Department of Endocrinology, BSMMU, Shahbag, Dhaka, Bangladesh; [4]Koushik Ashraf, Resident, Department of Endocrinology, BSMMU, Shahbag, Dhaka, Bangladesh; [5]Marufa Mustari, Assistant professor, Department of Endocrinology, BSMMU, Shahbag, Dhaka, Bangladesh; [6]Murshed Ahamed Khan, Associate professor, Department of Endocrinology, BSMMU, Shahbag, Dhaka

Abstract

A 64-year-old woman was diagnosed with goiter and hypothyroidism. Her initial thyroid function tests showed TSH: 85.93 µIU/ml, FT4: 1.7 µg/dl, and positive antithyroid autoantibodies. Levothyroxine was started. While she achieved euthyroidism, her goiter kept growing. Six months later she presented to us with large neck swelling, dysphagia, and voice change. Physical examination revealed a diffuse, fixed, non-tender stony-hard goiter. Neck ultrasonography revealed an enlarged, hypoechoic & non-homogenous thyroid. MRI revealed hypo-isointense enlarged thyroid with inferior extension to superior mediastinum. FNAC shows fibrous tissue fragments, follicular epithelial cells, lymphocytes & macrophages without malignant cells. Fiber Optic laryngoscope shows left vocal cord palsy. Upper GI endoscopy revealed external compression at the level of the upper esophagus. Considering the above background, a diagnosis of Riedel's thyroiditis with hypothyroidism, and left vocal cord palsy was established. A high dose of corticosteroid (intravenous) along with mycophenolate mofetil (MMF) was successfully started in our patient. The patient experienced immediate subjective improvement of compressive symptoms within 2 weeks, significant objective improvement in thyroid size within 6 months, and became non-visible within one year of treatment. She got MMF 500 mg BID for one year and currently getting 500 mg OD. Based on our report, MMF combined with dexamethasone offers a promising treatment alternative. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S52]*

Keywords: Riedel's thyroiditis, Dexamethasone, Mycophenolate mofetil

Presenting and corresponding author: Dr. Krishna Airi, Resident, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Shahbag, Dhaka, Bangladesh. email: airikrishna7@gmail.com.

Free paper: Poster presentation

Comparative analysis of cost-effectiveness between sulfonylureas and DPP-4 inhibitors in combination with metformin in the treatment of type 2 diabetic patients: A retrospective study

*Akter S[1], Rahman MS[2], Afsana F[3]

[1]Sheuly Akter, Resident, Phase B, Department of Pharmacology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh; [2]Md. Sayedur Rahman, Professor and Chairman, Department of Pharmacology, BSMMU, Dhaka, Bangladesh; [3]Faria Afsana, Associate Professor, Department of Endocrinology, BIRDEM General Hospital, Dhaka Bangladesh.

Abstract

Background: Lifelong pharmacotherapy for a chronic disease like diabetes has a significant economic burden for the patients, especially in a resource-poor country like Bangladesh.

Objective: To evaluate the cost-effectiveness between low-cost sulfonylureas and more expensive newer agent dipeptidyl peptidase-4 (DPP-4) inhibitors in combination with metformin in treating type 2 diabetes mellitus (T2DM).

Methods: This was a retrospective, observational, multicentre study. T2DM patients (n=191), diagnosed for 2-5 years and having either sulfonylureas plus metformin (n=95) or DPP-4 inhibitors plus metformin (n=96) were included in this study. Cost-effectiveness analysis was done in case of target achievement of HbA1c%, requiring hospitalization, insulin therapy, addition of any 3rd line drug, and development of nephropathy.

Results: The cost per patient per year was 1.6 times more in the DPP-4 inhibitor group than in the sulfonylureas group. The difference in cost per unit achievement of target HbA1c (<7%) and unit reduction in insulin therapy was non-significant between the DPP-4 inhibitors and sulfonylureas group. By expensing more than 5000 BDT/patient/year, DPP-4 inhibitors had given no extra protection against nephropathy, hospitalization, and 3rd line therapy. Adverse events were few in both groups. Hypoglycemia episodes were n=3 in the sulfonylureas group and n=1 in the DPP-4 inhibitors group. The incremental cost-effectiveness ratio (ICER) indicated, with sulfonylureas, there is an average gain of about 107735 BDT/patient/year for the delay in development of nephropathy and reduction of hospitalization and about 67334.5 BDT/patient/year for reduction of 3rd line drug.

Conclusions: There were non-significant differences in glycemic control and requirement of insulin therapy, but compared to metformin plus DPP-4 inhibitors, metformin plus sulfonylureas is a cost-effective therapy when used as an initial combination therapy in patients of T2DM in reduction of hospitalization, 3rd line drug and nephropathy development. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S53]*

Keywords: Cost-effectiveness analysis, Sulfonylureas, DPP-4 inhibitors, Metformin

***Corresponding and presenting author:** Dr. Sheuly Akter, Department of Pharmacology, BSMMU, Shahbag, Dhaka. Mobile no.: 01558945241, Email: dr.sheuly7314@gmail.com

Salivary cortisol as an alternative procedure for the diagnosis of adrenal insufficiency

*Zannat T[1], Amin MF[2], Afsana F[3], Hossain N[4], Rouf RS[5], Rahman SI[6]

[1]Tanjina Zannat, Resident, Department of Endocrinology, Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders (BIRDEM), Shahbag, Dhaka; [2]Md Feroz Amin, Professor, Department of Endocrinology, BIRDEM, Shahbag, Dhaka; [3]Faria Afsana, Associate professor, Department of Endocrinology, BIRDEM, Shahbag, Dhaka; [4]Nazmul Hossain, Assistant professor, Department of Endocrinology, BIRDEM, Shahbag, Dhaka; [5]Rushda Sharmin Binte Rouf, Assistant Professor, Department of Endocrinology, BIRDEM, Shahbag, Dhaka; [6]Shahin Ibne Rahman, Registrar, Department of Endocrinology, BIRDEM, Shahbag, Dhaka

Abstract

Background: Adrenal insufficiency (AI) is diagnosed using serum cortisol after a short synacthen test (SST). The measurements of stimulated salivary cortisol levels using the SST are comparable to those of stimulated serum cortisol in terms of diagnostic performance for AI.

Objective: To utilize morning basal and stimulated salivary cortisol instead of serum total cortisol by SST for diagnosis of AI.

Methods: This cross-sectional observational study was conducted in the Department of Endocrinology, BIRDEM General Hospital from July 2023 to June 2024.101 cases of suspected AI patients of >18 years were enrolled. Suspected AI patients have undergone measurement of basal serum and salivary cortisol. After intravenous administration of 250 µg synacthen, serum cortisol, and salivary cortisol levels were measured at 30 and 60 minutes.

Results: Out of 101 patients, 65 (64.4%) had AI and 36 (35.6%) had no AI. The mean age of adrenal insufficiency was 44.11±15.76 and out of 65 AI patients, 34 (52.3%) were females. Significant correlations were found between basal serum and salivary cortisol (r=0.799; p=0.001), serum and salivary cortisol at 30 (r=0.804; p=0.001) and also at 60 minutes (r=0.823; p=0.001) after SST. The cut-off value of basal salivary cortisol was 4.7 nmol/L (90.8% sensitivity and 86.1% specificity, AUC: 0.962, p=0.001), stimulated salivary cortisol at 30-min was 5.05 nmol/L (sensitivity of 83.3% and specificity of 84.6%, AUC: 0.957, p=0.001) and at 60-min cut-off value was found 5.4 nmol/L (sensitivity of 90.8% and specificity of 77.8%, AUC: 0.958, p=0.001).

Conclusions: We found that stimulated salivary cortisol levels at 30 and 60 minutes have comparable sensitivity and specificity for the diagnosis of AI. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S54]*

Keywords: Adrenal insufficiency, Basal salivary cortisol, Stimulated salivary cortisol

***Presenting and corresponding author:** Dr.Tanjina Zannat, Department of Endocrinology, Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders (BIRDEM), Shahbag, Dhaka. Cell# +88 01710-272277, Email: tanjinacomc14@gmail.com

Real-life glycemic scenario at the community level of Bangladesh

Ratul RH[1], Mashfiqul-Hasan[2], Atiqur-Rahman M[3], Nusrat-Sultana[4], Shahidul-Islam KM[5], *Hasanat MA[6]

[1]Rifat Hossain Ratul, Research Assistant, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Shahbag, Dhaka, Bangladesh; [2]Mashfiqul-Hasan, Assistant Professor & PhD Researcher, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [3]Mohammad Atiqur Rahman, Assistant Professor, National Institute of Neurosciences and Hospital, Dhaka, Bangladesh; [4]Nusrat-Sultana, Associate Professor, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [5]K M Shahidul-Islam, Department of Microbiology, Dhaka Medical College, Dhaka, Bangladesh; [6]Muhammad Abul Hasanat, Professor, Department of Endocrinology, BSMMU, Dhaka, Bangladesh

Abstract

Background: Population-based studies in Bangladesh revealed an increasing prevalence of Diabetes mellitus (DM) in both rural and urban areas. However, the real-life scenario of glycemic status may not be well reflected in designed studies.

Objective: To assess the glycemic status by measuring capillary blood glucose (CBG) in various rural and urban communities of Bangladesh.

Methods: This survey encompassed 2209 people [median age 45, interquartile range 36-55 years; female 53.4%; known diabetes 33%] attending different awareness and community health survey programs organized by the investigators in various communities during the last 12 years. CBG was measured by a calibrated glucometer regardless of feeding status (fasting/random) or glycemic status (known diabetes or not). The glycemic status of non-diabetic persons was categorized according to their fasting/random CBG value by using the cut-offs used during an oral glucose tolerance test, and glycemic control of people with diabetes was categorized as per recommendations of professional societies (good control if fasting <7 or random <10 mmol/L).

Results: Among participants with known diabetes (n=727), 40% had blood glucose within the control range. In contrast, among those with unknown glycemic status (n=1482), 22.4% had dysglycemia [DM/impaired fasting glycemia (IFG) or impaired glucose tolerance (IGT)]. The frequency of dysglycemia, as judged by fasting CBG (n=727), was 34.6% (DM 8.2% and IFG 26.4%), and by random CBG (n=1482) 18.3% (DM 5.6% and IGT 12.7%). Dysglycemia was similar across genders (p=0.260) but higher in those aged >30 years (p=0.012) with a family history of DM (p=0.040).

Conclusions: More than one in five persons among newly tested had dysglycemia, and three out of five previously known diabetic patients had uncontrolled DM in different communities of Bangladesh. We conclude that control and prevention strategies should be further strengthened to reduce the forthcoming burden of the problem. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S55]*

Keywords: Dysglycemia, Real-life scenario, Bangladesh

Presenting author: Dr. Rifat Hossain Ratul, Research Assistant, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Shahbag, Dhaka, Bangladesh

***Correspondence:** Prof M A Hasanat, Professor of Endocrinology, Room# 1524, Department of Endocrinology, Block# D, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh.
Cell# +88 01711-670735, email: aryansowgat@gmail.com

A six-year-old boy with precocious puberty and café-au-lait spots

Chowdhury P[1], Hoque AM[2], Banu H[3], Sultana N[4], Jahan S[5], *Hasanat MA[6]

[1]Prodipta Chowdhury, Resident, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh; [2]Ahmad Monirul Hoque, Resident, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [3]Hurjahan Banu, Assistant professor, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [4]Nusrat Sultana, Associate professor, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [5]Sharmin Jahan, Associate professor, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh; [6]Muhammad Abul Hasanat, Professor, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh

Abstract

A six-year and 10 month-old-boy presented to us with a growth spurt & premature appearance of secondary sexual characteristics including pubic hair, phallic and testicular enlargement. He also had aggressive behavior, occasional headaches, hyperphagia, café-au-lait spots & a positive family history of nodular skin disease. During thorough evaluation, pubertal gonadotropin response was established after GnRH stimulation, and bone age was significantly advanced. Later a brain MRI revealed an optic pathway glioma. Based on suggestive family history, clinical features & imaging he was diagnosed as a case of neurofibromatosis 1 (NF1). As he was symptomatic, a neurosurgical opinion was sought. Finally, He was given a gonadotrophin agonist while awaiting neurosurgical management. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S56]*

Keywords: Precocious puberty, Neurofibromatosis, Optic glioma, Café-au-lait spot

Presenting author: Dr. Prodipta Chowdhury, Resident, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh

***Correspondence:** Prof. M A Hasanat, Professor of Endocrinology, Room# 1524, Department of Endocrinology, Block# D, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh.
Cell# +88 01711-670735, email: aryansowgat@gmail.com

Rabson-Mendenhall syndrome: A rare disorder with severe insulin resistance

Hossain MA[1], Chowdhury P[2], Banu H[3], Sultana N[4], Jahan S[5], *Hasanat MA[6]

[1]Md. Ashraful Hossain, Resident, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh; [2]Prodipta Chowdhury, Resident, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [3]Hurjahan Banu, Assistant professor, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [4]Nusrat Sultana, Associate Professor, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [5]Sharmin Jahan, Associate Professor, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [6]Muhammad Abul Hasanat, Professor, Department of Endocrinology, BSMMU, Dhaka, Bangladesh

Abstract

A 10-year-old girl, born to a non-consanguineously married couple with a non-significant perinatal history, was referred from dental OPD with severe hyperglycemia and crowding of teeth. She developed classical symptoms of diabetes including weight loss over the last three years. On physical examination, the patient was syndromic having coarse facies, prognathism, gingival hyperplasia, larger lower lip, two extra teeth in the lower jaw, hyperpigmented skin, hypertrichosis, severe acanthosis nigricans & dystrophic nails. She also had expressive aphasia & hearing impairment. Her height & weight were below the 5th percentile. Biochemical investigations revealed insulin resistance by high fasting insulin and high normal C-peptide with very high HOMA-IR. She was treated with insulin, requiring more than 03 unit/kg body weight with insulin sensitizer metformin and pioglitazone but her post-prandial blood glucose was still poorly controlled. Rabson-Mendenhall syndrome is a genetic disorder, the treatment of which remains far from satisfactory. Newer research targeting gene therapy may help improve the clinical outcome in these patients. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S57]*

Keywords: Rabson-Mendenhall syndrome, Diabetes mellitus, Insulin resistance

Presenting author: Dr. Md. Ashraful Hossain, Resident, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh. Cell# +88 01816 490200, E-mail: ashrafulhossain30@gmail.com

***Correspondence:** Prof. M A Hasanat, Professor, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh. Cell# +88 01711 670735, E-mail: aryansowgat@gmail.com

Comparison of glycemic tests among women with polycystic ovary syndrome

Siddika MA[1], *Banu H[2], Morshed MS[3], Hasanat MA[4]

[1]Munira Afroz Siddika, Resident, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Shahbag, Dhaka-1000, Bangladesh; [2]Hurjahan Banu, Assistant Professor & PhD Researcher, Department of Endocrinology, BSMMU, Shahbag, Dhaka-1000, Bangladesh; [3]Md Shahed Morshed, PhD Researcher, Department of Endocrinology, BSMMU, Shahbag, Dhaka-1000, Bangladesh; [4]Muhammad Abul Hasanat, Professor, Department of Endocrinology, BSMMU, Shahbag, Dhaka-1000, Bangladesh

Abstract

Background: Abnormal glycemic status (AGS) is common among women with polycystic ovary syndrome (PCOS). The diagnostic performances of different glycemic tests [fasting plasma glucose (FPG), two hours after oral glucose tolerance test (2H-OGTT), and hemoglobin A1c (HbA1c)] were not evaluated adequately among women with PCOS.

Objective: To assess the agreement and diagnostic utility of three different glycemic tests among women with PCOS.

Methods: This cross-sectional study conveniently included newly diagnosed reproductive-aged (13 – 40 years) women with PCOS from the PCOS clinic of a university hospital based on Rotterdam criteria. FPG & glucose after a standard OGTT (2H-OGTT) and HbA1c were measured. Glycemic status was defined by the American Diabetes Association, 2019 guidelines into normal (NGS) and abnormal (AGS- anyone: FPG ≥5.6 mmol/L, 2H-OGTT ≥7.8 mmol/L, HbA1c ≥5.7%). AGS was further divided into prediabetes (PDM) and diabetes mellitus (DM- anyone: FPG ≥7.0 mmol/L, 2H-OGTT ≥11.1 mmol/L, HbA1c ≥ 6.5%).

Results: Among 789 women, FPG & 2H-OGTT reports were available for all, but HbA1c was only for 128 participants. Nearly 6.3%, 35.0%, and 58.7% had DM, PDM, and NGS respectively. Among the three tests, HbA1c (52.4%) detected more abnormal glycemic status than FPG (20.1%) and 2H-OGTT (30.1%). There were fair agreements between any of the two criteria with the highest agreement between HbA1c and FPG criteria (κ=0.390, $p<0.001$). ROC curve analysis showed that the HbA1c had the highest AUC with significant differences from FPG and 2H-OGTT values as markers of AGS & PDM, but similar for DM.

Conclusions: HbA1c might be a better test to detect glycemic abnormalities than FPG and 2H-OGTT among women with PCOS. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S58]*

Keywords: Polycystic ovary syndrome, Prediabetes, Diabetes mellitus, HbA1c, Oral glucose tolerance test

Presenting author: Dr. Munira Afroz Siddika, FCPS (Med), Phase B Resident, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Shahbag, Dhaka-1000, Bangladesh

***Correspondence:** Dr. Hurjahan Banu, Assistant Professor & PhD Researcher, Room# 1524, Level# 15, Department of Endocrinology, Block# D, Bangabandhu Sheikh Mujib Medical University (BSMMU), Shahbag, Dhaka-1000, Bangladesh. Cell# +88 01712-614949, email: dr.hurjahan_banu@yahoo.com.

Proportion and risk factors of hypothyroidism among patients with ischemic heart disease attending a tertiary care Hospital

*Rezwana I[1], Pathan MF[2]

[1]Israt Rezwana, Registrar, Department of Medicine, Sir Salimullah medical college and Mitford hospital, Dhaka, Bangladesh;
[2]Md. Faruque Pathan, Professor of Endocrinology, BIRDEM, Dhaka, Bangladesh

Abstract

Background: Hypothyroidism in patients with cardiac diseases is associated with worse outcomes. However, this has not yet been adequately investigated in Bangladeshi people.

Objective: To find out the proportion and risk factors of hypothyroidism among patients with ischemic heart disease.

Methods: An observational study was carried out on 90 diagnosed patients of ischemic heart disease without previous hypothyroidism from the department of Endocrinology and allied medicine department, BIRDEM General Hospital. TSH, FT4 and antithyroid peroxidase antibody were analyzed by chemiluminescent immunoassay method. Chi-square test, Independent sample t-test, Mann Whitney U-test, one way ANOVA and Kruskal-Wallis test was done as required. Binary logistic regression analysis was performed to assess the predictors of thyroid dysfunction.

Results: Of the 90 participants analyzed, 68 (75.6%) were euthyroid, 15 (16.7%) had subclinical hypothyroidism (SCH) and 7 (7.8%) had overt hypothyroidism. Among the hypothyroid group, 7 (31.8 %) patients were anti TPO antibody positive. Hypothyroidism was significantly higher in female gender, non-smoker, obese, HbA1C≥ 10% and LVEF <50%. In hypothyroid group, mean ±(SD) systolic blood pressure, diastolic blood pressure, BMI and HbA1c were significantly more. Though 95.5% hypothyroid patient had dyslipidaemia there were no significant differences observed in lipid profiles among hypothyroid and euthyroid patients. Heart failure patients showed significantly more hypothyroidism and low FT4 in comparison to patient without heart failure. TSH was significantly less in female gender and hypothyroid patients. Predictors for hypothyroidism in IHD patients were female gender, non-smoker, higher BMI (≥25 Kg/m2), higher SBP and HbA1c ≥10%. Among them, the strongest predictor was BMI with a odds ratio of 7.920.

Conclusions: Higher proportion of IHD cases are suffering from hypothyroidism. This necessitates that all IHD patients should be screened for thyroid profile and autoimmune status and managed accordingly. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S59]*

Keywords: Hypothyroidism, Ischemic heart disease, Subclinical hypothyroidism

***Corresponding & presenting author:** Dr. Israt Rezwana, Registrar, Department of Medicine, Sir Salimullah medical college and Mitford hospital, Dhaka, Bangladesh. Cell# +88 01710-79102,
email: tama36ssmc@gmail.com.

Sex hormone binding globulin in women with polycystic ovary syndrome

Islam MR[1], *Banu H[2], Morshed MS[3], Hasanat MA[4]

[1]Md. Rafayel Islam, FCPS Part-2 Trainee, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh; [2]Hurjahan Banu, Assistant Professor & PhD Researcher, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [3]Md Shahed Morshed, PhD Researcher, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [4]Muhammad Abul Hasanat, Professor, Department of Endocrinology, BSMMU, Dhaka, Bangladesh

Abstract

Background: Lower level of sex hormone-binding globulin (SHBG) is a common finding among women with polycystic ovary syndrome (PCOS). It also depends on metabolic features.

Objective: To assess the association of SHBG independent of metabolic features and as a marker among women with PCOS.

Methods: This case-control study included 274 reproductive-aged (16 -40 years) women with PCOS based on the International Evidence-based Guideline, 2018, and 174 matched controls conveniently between January 2021 and December 2023 from the PCOS clinic, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University. Along with clinical information, blood was drawn to measure glucose, lipids, insulin, total testosterone (TT), and SHBG by glucose oxidase, glycerol phosphate dehydrogenase peroxidase, and chemiluminescence immunoassay respectively. The SHBG level below the 25th percentile among controls was considered low.

Results: Women with PCOS had a significant association with low SHBG (<30.2 nmol/L) independent of body mass index (BMI), metabolic syndrome, and insulin resistance [OR (95% CI): 3.9 (2.3 – 6.8), p<0.001]. SHBG correlated positively with age & HDL cholesterol but negatively with BMI, waist circumference, OGTT glucose, triglyceride, and insulin. The receiver operating characteristics curve showed SHBG as a fair marker of PCOS [AUC (95% CI): 0.80 (0.76 – 0.85), p<0.001].

Conclusions: Women with PCOS had metabolic dysfunction independent association with low SHBG. It was a clinically useful marker of PCOS. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S60]*

Keywords: Polycystic ovary syndrome, Sex hormone-binding globulin, Metabolic syndrome, Insulin resistance

Presenting author: Dr. Rafayel Islam, FCPS Part-2 Trainee, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh.

***Correspondence:** Dr. Hurjahan Banu, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University, Dhaka-1000, Bangladesh, Cell# +88 01712-614949, email: dr.hurjahan_banu@yahoo.com.

Correlation of dyslipidemia and carotid artery intima-media thickness in young women with polycystic ovary syndrome

*Hossan S[1], Banu H[2], Morshed MS[3], Azad SA[4], Hasanat MA[5]

[1]Shamim Hossan, Ex-resident, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Bangladesh; [2]Hurjahan Banu, Assistant Professor, Department of Endocrinology, BSMMU, Bangladesh; [3]Md. Shahed Morshed, PhD Researcher, Department of Endocrinology, BSMMU, Bangladesh; [4]Salahuddin Al Azad, Professor, Department of Radiology & Imaging, BSMMU, Bangladesh; [5]Muhammad Abul Hasanat, Professor, Department of Endocrinology, BSMMU, Bangladesh

Abstract

Background: Dyslipidemia is commonly found in women with polycystic ovary syndrome (PCOS) which is an important risk factor for cardiovascular disease. Carotid intima-media thickness (CIMT) is a marker of atherosclerosis measured by B mode ultrasonography. The association of dyslipidemia and CIMT was not adequately evaluated.

Objective: To see and compare the level of CIMT in young women with PCOS and healthy controls and to assess the correlation between dyslipidemia and CIMT.

Methods: This cross-sectional study was done in the Department of Endocrinology, BSMMU which enrolled 40 newly diagnosed PCOS patients (18- 35 years) and an equal number of apparently healthy control. After collecting clinical data, fasting blood was drawn to measure glucose, lipid profiles, and hormones including insulin, and total testosterone using glucose oxidase, peroxidase, and chemiluminescent immunoassay respectively. Ultrasonography of pelvic organs was done in the early follicular phase. CIMT was measured by B-mode ultrasound image of the common carotid artery using a 08 to 12 MHz high-resolution linear ultrasound probe by a single sonologist.

Results: Compared to controls, young PCOS women had significantly elevated triglyceride (TG) [(101.0 (83.0, 165.0) vs. 83.5 (64.5, 136.25), mg/dL, p=0.028; median (IQR)] and CIMT [0.63 (0.60, 0.65) vs. 0.45 (0.41, 0.50), mm, median (IQR), <0.001]. Serum total cholesterol, LDL cholesterol, and HDL cholesterol levels did not differ significantly between the two groups of women. CIMT correlated with waist circumference (WC) (r=0.337, p=0.039) and TG (r=0.315, p=0.048) in PCOS.

Conclusions: Women with PCOS had higher TG and CIMT. In PCOS CIMT has an association with WC and TG. Our study suggests that PCOS women are prone to atherosclerosis from early age. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S61]*

Keywords: Dyslipidemia, Carotid intima-media thickness, polycystic ovary syndrome

***Corresponding & presenting author:** Dr. Shamim Hossan, Registrar, Department of Endocrinology, Rangpur Medical College & Hospital, Rangpur, Bangladesh. Cell# +88 01722-458905,
email: shamim.endo@gmail.com.

Why you should remain compliant with drugs!!! A 66-year-old female with Cardiac Tamponade: A rare complication of Hypothyroidism

*Chowdhury P[1], Zaman M[2], Azad A[3], Aftab K[4]

[1]Pavel Chowdhury, Medical Officer (Internal Medicine), Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh; [2]Mourin Binte Zaman, Medical Officer, Jajira Upazila Health Complex, Shariatpur, Bangladesh; [3]Md. Abul Kalam Azad, BSMMU, Dhaka, Bangladesh; [4]Kazi Ali Aftab, Assistant Professor (Medicine), BSMMU, Dhaka, Bangladesh

Abstract

A 66-year-old female retired banker with hypothyroidism and chronic lymphedema, noncompliant with levothyroxine presented to us with complaints of altered mental status, paranoid outbursts, and a sub-acute history of hallucinations. Reviews of symptoms were unable to be obtained due to paranoid delusions and nonsensical speech. Physical examination revealed a temperature of 96ºF, BP of 60/40 mm-Hg, Pulse of 56 b/min, and SpO2 was 92% with 3L O_2 via nasal cannula. A thyroid goiter, distal heart sounds, and pretibial myxedema were present. Biochemical features showed undetectable FT4 level with high TSH and imaging showed features of pericardial effusion. She underwent an emergent pericardiocentesis with the removal of more than 1300 ml of transudative fluid. She was diagnosed with myxedema coma and treated with levothyroxine and Hydrocortisone. Mental status, hemodynamics, and metabolic derangements resolved and the patient was subsequently discharged with close outpatient follow-up. Although cardiac tamponade is an uncommon cardiac consequence of hypothyroidism, it can be prevented and mortality can be decreased with timely detection, immediate pericardiocentesis, and thyroid hormone replacement therapy. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S62]*

Keywords: Cardiac tamponade, Hypothyroidism, Myxedema coma

Corresponding & Presenting author: Dr. Pavel Chowdhury, Medical Officer (Internal Medicine), BSMMU
Contact No.: +8801764081810, Email: dr.pavel.dmc.70@gmail.com

Serum afamin level in women with polycystic ovary syndrome: A pilot study

Rashid MJ[1], Morshed MS[2], *Banu H[3], Hasanat MA[4]

[1]Md. Jaminur Rashid, Ex-resident, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh; [2]Md Shahed Morshed, PhD Researcher, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [3]Hurjahan Banu, Assistant Professor, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [4]Muhammad Abul Hasanat, Professor, Department of Endocrinology, BSMMU, Dhaka, Bangladesh

Abstract

Background: Afamin is a special transporter of vitamin E significantly associated with insulin resistance and inflammation. These two features are important for the pathogenesis of polycystic ovary syndrome (PCOS).

Objective: To see the association of serum afamin level with PCOS and its manifestations.

Methods: This case-control study conveniently included 40 women with PCOS based on the International Evidence-based Guideline, 2018, and an equal number of matched healthy controls from a University hospital between July 2020 and September 2021. Along with clinical information, fasting, and OGTT blood was drawn to measure glucose, lipid, C-reactive protein, insulin, and afamin by glucose oxidase, glycerol phosphate dehydrogenase peroxidase, immunonephelometry, chemiluminescence immunoassay, and sandwich enzyme-linked immunosorbent assay respectively.

Results: Serum afamin level was statistically similar between PCOS and control [3.3 (0.1 – 10.8) vs. 0.5 (0.1 – 4.8), mg/L, median (IQR), p=0.077]. None of the clinical, biochemical, and hormonal variables had significant independent associations with afamin among women with PCOS. Afamin was a poor marker [AUC (95% CI): 0.6 (0.5 – 0.7), p=0.088] of PCOS but not for insulin resistance and metabolic syndrome among women with PCOS.

Conclusions: Afamin had no significant association with PCOS or its manifestations and it could not be used as a useful marker of PCOS. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S63]*

Keywords: Polycystic ovary syndrome; Afamin; Insulin resistance; Metabolic syndrome; C-reactive protein, Vitamin E

Presenting author: Dr. Md Jaminur Rashid, Emergency Medical Officer, Cumilla Medical College Hospital, Cumilla, Bangladesh. Cell# +880 1676-440060, email: jaminur2013@gmail.com.

***Corresponding author:** Dr. Hurjahan Banu, Assistant Professor & PhD Researcher, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Shahbag, Dhaka-1000, Bangladesh. Cell# +88 01712-614949, email: dr.hurjahan_banu@yahoo.com.

Acquired partial lipodystrophy/ Barraquer–Simons syndrome: A different form of lipodystrophy

*Dutta M[1], Siddika MA[2], Banu H[3], Islam MA[4]

[1]Mita Dutta, Endocrinologist, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh; [2]Munira Afroz Siddika, Resident, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [3]Hurjahan Banu, Assistant Professor and PhD Researcher, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [4]Mohammad Aminul Islam, Endocrinologist, National Academy for Planning and Development, Dhaka, Bangladesh

Abstract

A 23-year-old lady visited the Endocrinology outpatient department with complaints of menstrual irregularity in the form of oligomenorrhea since her onset of menarche. She and her family members also observed wasting of her face and upper part of her body, and a gradual increase of her lower part of the body that is about 10-12 years. She cannot recall any significant illness just before the onset of this particular illness. There is obvious wasting of face and hypertrophy of the lower part of the body, prominent masculine features in the torso and upper extremities, including hairy forearms. Her investigations show normal hormone and metabolic panels with low complement C3 levels. DEXA scan was performed to see the body's fat mass which was found consistent with the diagnosis. This case illustrates the importance of recognizing the Barraquer–Simon syndrome, which may present severe metabolic consequences and psychological distress. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S64]*

Keywords: Lipodystrophy, Barraquer–Simon syndrome, Menstrual irregularity

Corresponding & Presenting author: Dr. Mita Dutta, Endocrinologist, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh, Cell# +88 01832-239117, email: mitadutta42@gmail.com.

Free paper: Poster presentation

Prevalence of prediabetes and its association with cardiometabolic risk factors among Bangladeshi youth in northern region

Ashraf K[1], Mashfiqul-Hasan[2], Salam SB[3], Ratul RH[4], Sultana N[5], *Hasanat MA[6]

[1]Koushik Ashraf, Resident, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh; [2]Mashfiqul Hasan, Assistant Professor & PhD Researcher, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [3]Sayad Bin Abdus Salam, Resident, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [4]Rifat Hossain Ratul, Research Assistant, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [5]Nusrat Sultana, Associate Professor & PhD Researcher, Department of Endocrinology, BSMMU, Dhaka, Bangladesh; [6]Muhammad Abul Hasanat, Professor, Department of Endocrinology, BSMMU, Dhaka, Bangladesh

Abstract

Background: Young individuals with prediabetes are at increased risk of developing DM and adverse cardiovascular outcomes.

Objective: To assess the prevalence of prediabetes and its association with cardiometabolic risk factors in young (age 10-34 years) people in northern Bangladesh (Rajshahi and Rangpur division).

Methods: This cross-sectional study enrolled 659 participants from two northern divisions of Bangladesh in 2024 by multistage random sampling and screened by WHO OGTT criteria. Plasma glucose was measured by a semi-automatic biochemical analyzer. Dyslipidemia was assessed by measuring the fasting lipid profile.

Results: The prevalence of prediabetes was 12.7% (84/659), which was 8.2% (26/317) and 17.0% (58/342) among adolescents (age 10-18 years) and young adults (19-34 years), respectively. Impaired glucose tolerance (IGT) constituted the largest proportion of prediabetes, with prevalence of 5.4% in adolescents and 13.5% in young adults. The proportion of impaired fasting glucose (IFG) was 1.3% and 3.4%, whereas IFG-IGT was present in the two groups at 1.6% and 0.9%, respectively. When compared to participants with normal glucose tolerance (NGT), participants with prediabetes had a higher frequency of female gender (67 vs 44%), upper tertiles of wealth index (49 vs 33%), overweight/obesity (33 vs 21%), central adiposity (32 vs 14%), elevated total cholesterol (4 vs 1%), LDL-cholesterol (4 vs 1%), triglyceride (18 vs 8%) and diastolic blood pressure distribution ($p<0.05$ for all). There was no significant difference in systolic blood pressure across the groups, nor was any association of prediabetes with smoking or smokeless tobacco consumption, level of physical activity, self-reported vegetable and fruit consumption habit, sedentary period, screen time and duration of sleep (p=ns for all).

Conclusions: Prediabetes among the northern part of Bangladeshi youth is prevalent in a ratio of 1 in every 8, which is alarming. Obesity and dyslipidemia are important cardiovascular risk factors associated with them. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S65]*

Keywords: Dr. Prediabetes, Young, Bangladeshi, Cardio-metabolic risk factors

Presenting author: Dr. Koushik Ashraf, Resident, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh

***Corresponding author:** Prof. M A Hasanat, Professor, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh. Contact-01711670735, E-mail: aryansowgat@gmail.com

Dyslipidemia pattern varies with the metabolic phenotype of polycystic ovary syndrome

Iliyas SB[1], Morshed MS[2], *Banu H[3], Hasanat MA[4]

[1]Samirah Binte Iliyas, Resident (Endocrinology & Metabolism), Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Shahbag, Dhaka-1000, Bangladesh; [2]Md Shahed Morshed, PhD Researcher (Endocrinology), Department of Endocrinology, BSMMU, Shahbag, Dhaka-1000, Bangladesh; [3]Hurjahan Banu, Assistant Professor, Department of Endocrinology, BSMMU, Shahbag, Dhaka-1000, Bangladesh; [4]Muhammad Abul Hasanat, Professor, Department of Endocrinology, BSMMU, Shahbag, Dhaka-1000, Bangladesh

Abstract

Background: The lipid profile among women with polycystic ovary syndrome (PCOS) is influenced by both insulin resistance and hyperandrogenism. The association of lipid profiles in metabolic phenotype-predominant women with PCOS was not adequately evaluated.

Objective: To see the association of lipid profile with different features among women with PCOS.

Methods: This case-control study included 287 reproductive-aged females with PCOS and 190 age-matched controls conveniently from the PCOS clinic, Department of Endocrinology of a University hospital between September 2020 and August 2022. The fasting glucose, insulin, and lipid profiles were analyzed using the glucose oxidase, chemiluminescence immunoassay, and glycerol phosphate dehydrogenase peroxidase methods respectively. LDL cholesterol was calculated from Friedwald's formula or measured directly. The National Cholesterol Education Program defined risk categories of different lipid fractions, Adult Treatment Plan III. Participants were divided into lean (<23 kg/m^2), overweight (23 – 27.4 kg/m^2), and obese (≥27.5 kg/m^2) by body mass index, and insulin resistant by homeostasis model assessment of insulin resistance (HOMA-IR) ≥2.6

Results: Approximately, 70.7% of women with PCOS had at least one abnormality in lipid profile. Among all the lipid fractions' classifications, only the high-risk LDL-cholesterol category had a significant association with PCOS after adjustment for BMI and HOMA-IR statuses [OR=9.2, p=0.041]. Different lipid fractions differed between the study groups only in lean-overweight and insulin-sensitive groups. However, none of the diagnostic features including phenotypes had significant associations with lipid fraction categories.

Conclusions: Only LDL cholesterol had an independent association with PCOS. Association of lipid fractions with PCOS was lost among women with obesity and IR. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S66]*

Keywords: Polycystic ovary syndrome, Lipid profile, Cholesterol, Dyslipidemia

Presenting author: Dr. Samirah Binte Iliyas, Resident (Endocrinology & Metabolism), Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University, Shahbag, Dhaka-1000, Bangladesh

***Corresponding author:** Dr. Hurjahan Banu, Assistant Professor and PhD Researcher, Room#1524, Level#15, Block#D, Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University, Shahbag, Dhaka-1000, Bangladesh. Cell# 01712-614949, email: dr.hurjahan_banu@yahoo.com.

A seven-year girl entering womanhood

*Asefeen J[1], Kabir H[2], Hasan MM[3], Islam M[4], Prasad I[5]

[1]Jannatul Asefeen, Resident, Department of Endocrinology, Dhaka Medical College Hospital (DMCH), Dhaka, Bangladesh; [2]Humayun Kabir, Assistant Registrar, Department of Endocrinology, DMCH, Dhaka, Bangladesh; [3]Md Mahmud Hasan, Medical Officer, Department of Endocrinology, DMCH, Dhaka, Bangladesh; [4]Moinul Islam, Associate Professor, Department of Endocrinology, DMCH, Dhaka, Bangladesh; [5]Indrajit Prasad, Professor, Department of Endocrinology, DMCH, Dhaka, Bangladesh

Abstract

A 7-year-old girl was diagnosed with autoimmune hypothyroidism and type 1 diabetes mellitus (T1DM). However, she had no features of Addison's disease. She had a history of menarche at the age of 2 years and 6 months and presented with a bilateral ovarian cyst and delayed bone age. She was treated with thyroxine along with insulin. Thyroxine therapy caused a reduction in the size of ovarian cysts and no further occurrence of menstrual bleeding. The combination of precautious puberty from hypothyroidism with T1DM is rare in the literature. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S67]*

Keywords: Autoimmune hypothyroidism, Type 1 diabetes mellitus, Ovarian cyst

Corresponding & Presenting author: Dr. Jannatul Asefeen, Resident, Department of Endocrinology, Dhaka Medical College Hospital, Dhaka, email: jannatulasefeendesdimonak68@gmail.com

From micro to giant to complete regression: Voyage of a prolactinoma

*Saha A[1], Laboni R[2]

[1]Anjana Saha, Registrar, National Cancer Research Institute & Hospital, Mohakhali, Dhaka, Bangladesh; [2]Rezwana Laboni, Medical officer, 250 Bedded Zilla Hospital, Munshiganj, Bangladesh

Abstract

We present a case of a 27-year-old lady suffering from secondary subfertility. On thorough investigations, she was found to have microprolactinoma and was put on a dopamine agonist. Two months later during an unplanned pregnancy, the tumor enlarged viciously evidenced by visual field loss, treated with dopamine agonist during pregnancy with an uneventful delivery of a healthy baby at term. In post-partum MRI there was a giant prolactinoma encaseating the carotid vessel. Since the visual field defect was corrected this time with no threat to the optic nerve, we decided to go for conservative management. Successfully the tumor disappeared in a nine-month postpartum period with dopamine agonist treatment. This case is notable in demonstrating the aggressive behavior of microprolactinoma during pregnancy and the effectivity of cabergoline in its management with treatment success to complete regression within a short period. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S68]*

Keywords: Prolactinoma, Cabergoline

Corresponding & Presenting author: Dr. Anjana Saha, Registrar, National Cancer Research Institute & Hospital, Mohakhali, Dhaka, Bangladesh. Cell# +88 01717-866822, email: anjanaendo@gmail.com

Journey of a young lady from near death to new life

*Siddiqui S[1], Aminuzzaman M[2], Sajol MM[3], Islam M[4], Indrajit-prasad[5]

[1]Shahinoor Siddiqui, Resident, Department of Endocrinology, Dhaka Medical College Hospital (DMCH), Dhaka, Bangladesh; [2]Md. Amiruzzaman, Resident, Department of Endocrinology, DMCH, Dhaka, Bangladesh; [3]Md. Mosfaqur Rahman Sajol, FCPS final part trainee, Department of Endocrinology, DMCH, Dhaka, Bangladesh; [4]Moinul Islam, Associate Professor, Department of Endocrinology, DMCH, Dhaka, Bangladesh; [5]Indrajit Prasad, Professor, Department of Endocrinology, DMCH, Dhaka, Bangladesh

Abstract

We describe a case of a 24-year-old lady who presented with hypotension and episodic features of pheochromocytoma. She was evaluated and diagnosed as right-sided pheochromocytoma with secondary Diabetes mellitus. The patient also developed supraventricular tachycardia and managed accordingly. The right adrenal gland was excised and histopathology confirmed pheochromocytoma. We aim to highlight the diagnosis of this rare tumor and how its early management can prevent morbidity and mortality. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2024;3(Suppl 1): S69]*

Keywords: Pheochromocytoma, Supraventricular tachycardia, Adrenal gland

Corresponding & Presenting author: Dr. Shahinoor Siddiqui, Resident, Department of Endocrinology, Dhaka Medical College, Dhaka. Email: dr.runa14@gmail.com