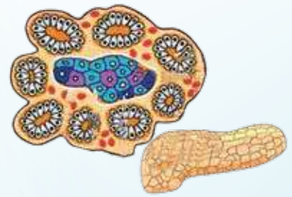

2nd International Endocrine Conference & 7th Annual General Meeting 2019 Bangladesh Endocrine Society

Translating evidence to clinical practice

1st and 2nd November 2019, Dhaka, Bangladesh

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Contents

Message From Chief Guest

To all members of the Bangladesh Endocrine Society (BES)

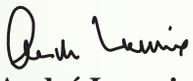
Dear Colleagues,

I am very honored to have been invited to participate in your 2nd International Endocrine Conference and 7th Annual General Meeting which will be held in Dhaka on November 1 and 2 2019. The International Society of Endocrinology is excited to support and partner with the Bangladesh Endocrine Society, its leadership team and program scientific committee for this edition of your congress.

ISE's mission is to provide optimized lifelong health for people with endocrine disorders on a global scale through education and training, promoting international exchanges and supporting the young generation. We are proud to offer a genuinely enriching and professional exchange of knowledge with world-renowned endocrinologists who will be attending the conference, and to enable increased international exchanges for early career researchers.

This congress will be a unique opportunity for the Bangladesh and the South Asian Federation of Endocrine Societies (SAFES) endocrinologists and other clinicians to connect with the international endocrine community to explore and understand the optimal approaches to investigate and treat individuals with diabetes and other endocrine disorders.

I very much look forward to meeting you in Dhaka and wish all of you an excellent meeting.



André Lacroix
ISE chair
Professor of Medicine
Endocrine Division
Centre hospitalier de l'Université de Montréal (CHUM)

Message From Honorary President

To all members of the Bangladesh Endocrine Society (BES)

It's a great pleasure for me to know that Bangladesh Endocrine Society is going to organize the 2nd International Endocrine Conference & 7th Annual General Meeting on 1st and 2nd November 2019.

Endocrinology as a specialty has made enormous progress over the last few decades in this country. Bangladesh Endocrine Society has been working for the advancement of Endocrinology for the last twenty years. The society maintains effective collaboration with other clinical disciplines and organizations at home and abroad.

I wish their great success.

Prof A K Azad Khan
President
Bangladesh Diabetic Somity

Message From Honorary President

To all members of the Bangladesh Endocrine Society (BES)

It's my honor to be invited as special guest in the 2nd International Endocrine Conference & 7th Annual General Meeting 2019 organized by Bangladesh Endocrine Society. Endocrinology has strongly established itself as an important super specialty in the field of medicine, and hopefully will gain more importance in the future days as non-communicable diseases are becoming increasingly more prevalent. Bangladesh Endocrine Society is working for the advancement of Endocrinology in this country since its inception, and we hope that this trend will continue so that knowledge of endocrinology is disseminated to each and every corner of the country.

I wish the event a grand success.

Hajera Mahtab

Prof Hajera Mahtab
Professor Emeritus
Bangladesh University of Health Sciences

Message From President

To all members of the Bangladesh Endocrine Society (BES)

It's my immense pleasure to welcome all the distinguished faculties and participants to the 2nd International Endocrine Conference and 7th Annual General Meeting of Bangladesh Endocrine Society, to be held on 1st and 2nd November 2019. Since its inception, BES has established itself as the platform for the endocrinologists for their academic and professional advancement by encouraging clinical activities and research. Along with this, BES regularly arranges international programs so that the endocrinologists can enrich their knowledge by exchanging views with the distinguished endocrinologists across the globe. The upcoming conference will be highly valued by scientific sessions and workshops conducted by renowned experts from home and abroad. We hope that the conference will enlighten to all the participants, there by further improvement of our clinical practice. The AGM of BES will also be held at the same time, and we look forward for active participation from all members of BES in the AGM.

I wish the conference and AGM a grand success.

Prof Md Faruque Pathan
President
Bangladesh Endocrine Society

Message From General Secretary, BES

To all members of the Bangladesh Endocrine Society (BES)

It's my privilege to welcome you all to the 2nd International Endocrine Conference and 7th Annual General Meeting of Bangladesh Endocrine Society, to be held on 1st and 2nd November 2019 at Hotel Pan Pacific Sonargaon, Dhaka. Bangladesh Endocrine Society has been working for last three decades for the advancement of Endocrinology in Bangladesh. Last year we have successfully arranged the 1st International Endocrine Conference, and this year we arranged the BES-MAYO Endocrine conference in collaboration with the MAYO Clinic, USA. We have also published two guidelines, the insulin guideline and the guideline on management of diabetes in Ramadan. The upcoming 2nd International Endocrine Conference, we hope, will be far more interesting as well as enlightening for the endocrinologists. We have spread the scientific sessions over two days, all of which will be conducted and guided by renowned national and international faculties. I am delighted to inform that our conference has been endorsed by International Society of Endocrinology (ISE), AACE and SAFES.

I believe that all of you will enjoy the program. In addition, we will also participate in the AGM on 2nd November 2019. The success of AGM depends on active participation, innovative proposals and constructive criticisms from all the members of BES. From this AGM, we will review our past activities and get the directions for the future.

I express my gratitude to the organizers and scientific partners for their invaluable contribution and relentless effort to make this conference successful.

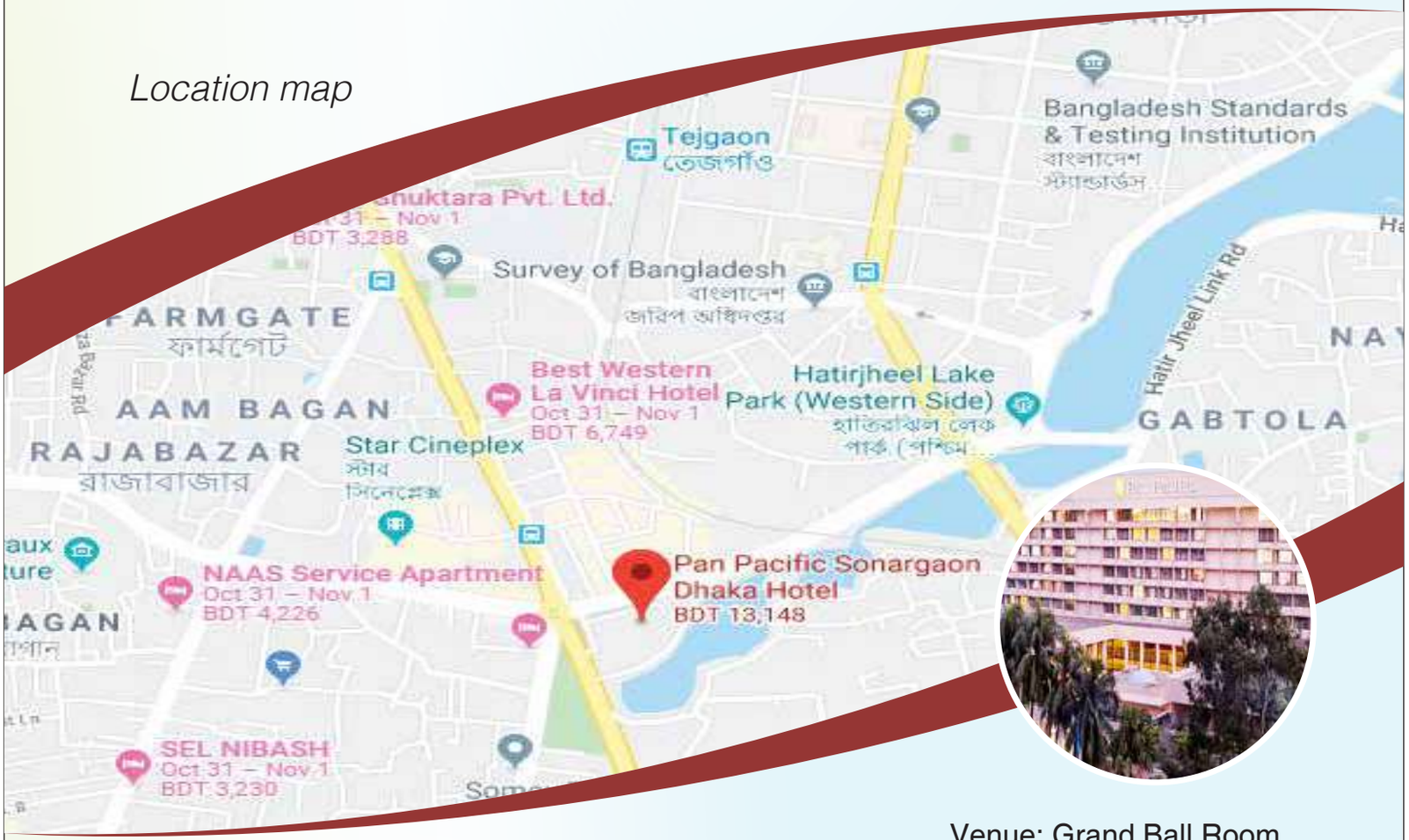
With the best regards

Prof Md Hafizur Rahman
General Secretary
Bangladesh Endocrine Society

2nd International Endocrine Conference & 7th Annual General Meeting 2019

Bangladesh Endocrine Society

Location map



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Bangladesh Endocrine Society
2nd International Endocrine Conference and 7th AGM 2019

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Abstract

Title: PEARLS IN THE DIAGNOSIS AND MANAGEMENT OF AUTOIMMUNE THYROID DISEASE

Duncan Topliss[1]

1Department of Endocrinology & Diabetes, Alfred Hospital, & Department of Medicine, Monash University, Melbourne, Australia

Hashimoto's thyroiditis (HT, chronic lymphocytic thyroiditis) can wax and wane initially. The goitrous form is associated with HLA DR5 and the atrophic form with DR3. Although circulating anti-thyroglobulin (aTg) was the first antibody described with HT, anti-thyroid peroxidase (antiTPO) alone is sufficient for serological diagnosis. Neither nuclear scanning nor ultrasonography is routinely required for diagnosis. Ultrasonography should be used for the investigation of a specific nodule. Thyroid lymphoma is almost exclusively seen in HT but the absolute risk is very low. Associated hypothyroidismvaries from subclinical to severe myxoedema. HT in pregnancyis important as even subclinical hypothyroidism may have an adverse effect on the fetus and increase obstetric complications. High risk women should have thyroid function testing. Normalization of maternal serum TSH (< 4 mU/L) by levothyroxine therapy is recommended. The risk of post partum thyroiditis is increased in the presence of antiTPO. Hypothyroidism can persist (25%) or develop (4% per year if antiTPO is present). Post partum hyperthyroidism due tothyroiditis in comparison to Graves' disease (GD)is more common, is seen earlier, is milder, and does not persist. Drug-induced thyroid disease can result from a number of new immunologically-active agents: ipilimumab, characteristically causes hypophysitis and secondary hypothyroidism by disrupting CTL4-mediated immune suppression; pembrolizumab and nivolumab cause HT by disrupting PD1-mediated immune suppression; alemtuzumab characteristically causes GD hyperthyroidism by CD52-mediated immune reconstitution; and excess dietary or supplementaliodine promotes thyroid autoimmunity perhaps by increasing the immunogenicity of thyroglobulin. IgG4-associated thyroid disease is part of a wide range of other IgG4-associated diseases and includes a fibrosing variant of HT, and Riedel's thyroiditis, a rare chronic fibrosing infiltrative thyroid disease often associated with extrathyroidal fibrosclerosis. Relapse inGD is associated with persistent TSHR-Ab after an ATD course, and a T3-predominant thyroid function test pattern. A combination of clinical information and blood tests (GREAT score: young age, high fT4, high TSH receptor antibody titre, larger goitre size, specific HLA type, PTNP22 C/T polymorphism) enhances prediction of relapse and assists treatment selection.

Title: MANAGEMENT OF DIFFERENTIATED THYROID CARCINOMA: AN UPDATE

Duncan Topliss[1]

1Department of Endocrinology & Diabetes, Alfred Hospital, & Department of Medicine, Monash University, Melbourne, Australia

Differentiated thyroid carcinoma is constituted by papillary thyroid carcinoma (PTC), follicular thyroid carcinoma (FTC), and poorly differentiated thyroid carcinoma (PDTC). Modalities of therapy are thyroidectomy (lobectomy, Lx; total, Tx), radioiodine ablation/therapy (RAI), and levothyroxine suppressive therapy (LT4). For radioiodine-refractory progressive advanced disease, multikinase inhibitor therapy has proven efficacy. TNM staging is important in treatment and follow-up decisions. Higher risk subtypes of PTC (eg tall cell, columnar cell, cribriform/morular) influence management. Small PTCs (T1a, N0/N1a) can be managed conservatively with ultrasonographic (US) follow-up over 10-15 years with minimal or no local progression in many cases, but Lxalone is often still preferred. Lx for T1-2, N0/N1a PTC, without RAI or LT4 suppression of TSH is acceptable with continued US surveillance. Tx and low dose(30 mCi) RAI aids use of serum thyroglobulin (Tg) in followup,and is indicated for T3 N0 or T4 N0 DTC. Where doubt exists regarding RAI administration or not, a 6-week post-Tx Tg can assist. In low/intermediate risk DTC (T1-3, N1a, M0) the use of rhTSH and low dose RAI is equivalent in both

early ablation success and in longer follow-up to thyroid hormone withdrawal with high dose (100 mCi) RAI ablation. N1adisease has minimal effect on recurrence rates (versusN1b disease)but pre-operative US identification of metastatic node size > 3 cm and/or extra-nodal invasion indicates that loco-regional nodal resection should be performed, followed by high dose (100mCi) RAItherapy.Tx should be performed for T4, N0/N1a/N1b DTC,with at least level VI nodal resection,and RAI (usually high dose). The role of higher dose RAI (up to 150 mCi) or even higher dosimetry-determined activities remains unproven.Risk should be routinely categorized (Haugen etal Thyroid 2016: 26: 1-133).After RAI routine whole body scanning with SPECT assists in risk assessment.LT4 suppression only has benefit in disease at stage II or above, otherwise LT4 dosing to produce serum TSH in the low-normal range is appropriate. Low risk PTC patients with undetectable Tg and clear neck US two years after Tx can be followed with Tg alone thereafter. For FTC patients neck US is less informative but undetectable Tg is helpful. If antibodies against Tg render Tg uninformative then consideration to whole body RAI scanning should be given especially in FTC. Locally recurrent disease should be assessed for surgical resection, but RAI therapy may be adequate for low-volume disease. Detectable or rising Tg without structural neck disease may be assessed by whole body RAI scanning and may be due to low volume neck disease or distant metastatic disease.RAI-avid distant metastatic disease can be treated by repeated RAI, usually at 12 monthly intervals up to at least 600 mCi total dose. When RAI-non-avid/refractory distant disease is advancing, consideration to multikinase inhibitor therapy should be given according to burden of disease, rate of growth, and involvement at critical sites. Lenvatinib and sorafenib have proven efficacy, and treatment with cabozantinib, and PD-1 inhibitors such as pembrolizumab, are being trialled.For skeletal metastases external beam radiotherapy is palliative but very effective for pain control at specific sites, and periodic zoledronic acid dosing may reduce the risk of pathological fracture.

Title: OAD:APPROACH THE TARGET IN TYPE 2 DIABETES MELLITUS

Prof MD Faruque Pathan[1]
[1]BIRDEM General Hospital

Since the discovery of insulin in 1921 lots of changes were revealed in the etio-pathology of Diabetes Mellitus and its management.Current concepts are subsequently added by de-differentiation ,apoptosis of Beta cell and defect of insulin action of Triumvirate pathways with new ideas of Ominous Octet companionsof dysglycaemia,physician center approach to patient center approach,individualization of targets,self-management by diabetic education.Certain landmark studies have shown that optimized management of both new and old patients with diabetes certainly reduce complications as well as to minimize cost.Different Oral hypoglycemic drugs(OAD) have been introduced targeting different pathways of glucose homeostasis. Appropriate approach is to be made considering patient socioeconomic,phenotypic and biochemical profiles, coexisting complications and co-morbidities,adverse effects,proneness to hypoglycemia,weight gain.Till today initial drug is Metformin.Dual or triple therapy by OADs can be added considering complimentary and synergistic action profiles depending on individualized dysglycaemic defects. Preservation of Beta cell function and mass to hold the natural course of the disease, durability of efficacy, cardiovascular and renal safety and benefits, weight gain, hypoglycemia, other pleotropic benefits are the focusing points to introduce new oral or injectable antidiabetic drugs. Now ample evidences have been generated to reveal that reducing glucotoxicity promptly by insulin followed by OHA may be the best option for redifferentiation and maintenance of preservation of beta cells.

Title: Hypoparathyroidism: comprehensive management plan

Prof Md Hafizur Rahman

Hypoparathyroidism is a rare disease of mineral metabolism characterized by hypocalcemia and inappropriately low serum level of parathyroid hormone (PTH). In USA 37/100000 person/yr are affected, but exact prevalence in Bangladesh is not known. About 75% cases are due to neck surgery and rest are due to medical causes like autoimmune, genetic, functional or destruction of parathyroids. Most signs/symptoms are due to hypocalcemia leading to neuromuscular excitability or deposition of calcium in soft tissues. Biochemical evaluation is done by

measuring S Ca, PTH, PO4, Mg, 25-OHD & 1,25-(OH)2D, creatinine, 24-hr urine for Ca2+ and biochemical stone risk profile . Target organ damage is assessed by imaging like X-ray (skull), renal US or CT and BMD by DEXA. Genetic studies is needed in If young age, family history, multiple endocrine gland failure or hypoparathyroidism of unknown aetiology. If tetany, seizures, laryngospasm or cardiac dysfunction with proven or strong suspicion of low Ca, 10-20 mL of 10% Ca gluconate in 50 mL 5% Destrose aqua(DA)is given over 10-20 min with ECG monitoring.Then start IV infusion of 100 mL of 10% Ca gluconate in 1 000 ml of 5% DA @ 50-100 mL/hr. Monitor S Ca every 4-6 hours and adjust rate accordingly. Treat hypomagnesemia (if present) with IV Mg. Stop PPI/diuretics. IV Ca infusion is slow[y tapered (over 24-48 hr or longer) while oral Ca (0.5-1.5 G elemental Ca three times daily) is started and adjusted . If Ca alone is insufficient to raise the serum Ca within the lower normal range , then activated vitamin D (calcitrol) 0.25-2 µg BID can be given. For chronic hypocalcemia, treatment is recommended if S/S and/or S Ca <8.0 mg/dL. Management goal is 1) S Ca in low normal or slightly below normal range keeping patients free of S/S of hypocalcemia, 2) 24-hr U Ca within sex-specific reference ranges, 3) S PO4 within reference range, 5) S Ca×PO4 < 55 mg2/dL2 , 6) S Mg within reference range, and 7) aim for adequate vitamin D status. Conventional chronic management includes a) dietary Ca and oral Ca supplements , b) active vitamin D analogs and Calciferol , c) Mg replacement (Mg oxide/chloride)- if low, d) thiazide diuretics & low salt diet - to lower urinary-Ca and e) low phosphate diet ± phosphate binders – if hyperphosphatemia. But conventional treatment fails to maintain biochemical parameters within reference ranges and long-term well-being and QOL. in many cases. Recently FDA have approved rh PTH (1-84) (Natpara) for hypoparathyroidism only for patients who cannot be well-controlled on Ca supplements and active forms of vitamin D alone.

Title: Polycystic Ovarian Syndrome: Present and Future

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Clinical phenotypes of PCOS and metabolic abnormalities related to it are still far from clear. We have observed that phenotype A and B of PCOS have worse metabolic profile and higher prevalence of cardiovascular risk compared to phenotype C and D. Similarly, serum antimüllerian hormone level and prostate specific antigen correlate with the sonographically determined count of antral follicles and ovarian volume; but the diagnostic usefulness of these in women with PCOS is uncertain. Biochemical parameters of hyperandrogenemia including total testosterone, free androgen index, testostosterone dihydrotestosterone ratio were studied and have been found to correlate significantly with metabolic and clinical parameters. But ovarian morphology measured by USG did not correlate with insulin resistance in PCOS patients. The increasing burden of PCOS is thought to be exposure to pollutants like- bisphenol, polychlorinated biphenols, organic pesticides etc. Afamin, a novel binding protein for the antioxidant vitamin E is a promising marker of oxidative stress and preconceptional value may predict GDM development. Inflammation possibly influenced by the gut microbiome has recently been suggested as one of the driving forces behind the disease. And now also genetic components have been uncovered. Candidate genes for Toll-like receptor pathway, micro RNA etc. are some examples. Genetic polymorphisms of OCT1 might contribute to differences in the effectiveness of metformin treatment in PCOS patients. Further study is needed to establish personalized treatment programs for PCOS patients using a pharmacogenomic algorithm approach. There is controversy regarding thresholds for diagnosis in adolescents and therapeutic approaches. Metformin is found to have significant role in the management of insulin resistance and add on therapy of liraglutide further significantly improve clinical profile which was evidenced in our randomized control trial recently. Myoinositol therapy has recently shown multiple beneficial effects on PCOS. Newer molecules and drugs are on way to reveal the pathophysiology and better management of PCOS respectively.

Title: OBSTACLES AND MOTIVATION OF INSULIN INITIATION

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The benefits of timely glycemic control for reducing the risk of micro- and macrovascular complications are well established, yet many people with type 2 diabetes remain in poor glycemic control. Diabetes care has improved in the USA, Europeand elsewhere in recent decades, as reflected in the increased proportion of people with diabetes meeting national glycemic targets; however, there remains a substantial number of people with T2D who have inadequate glycemic control. In the UK, for example, a third of people with T2D do not achieve glycated hemoglobin (HbA1c) levels ≤7.5% (59 mmol/mol). This is despite the latest guidelines recommending intensification of current diabetes treatment if a person's individual HbA1c target is not achieved within 3 months, or within 3 to 6 months, after initiation. Delayed treatment intensification in uncontrolled patients can increase the risk of diabetes-related complications in later life. For example, the 10-year follow-up of the UK Prospective Diabetes Study showed that intensive glucose control (sulphonylurea or insulin or, if obese, metformin) from diagnosis was associated with significantly decreased risks of myocardial infarction, death from any cause and microvascular disease.3 In addition, a retrospective cohort study revealed that a 1-year delay in treatment intensification in patients with poor glycemic control significantly increased the risk of myocardial infarction (67%, hazard ratio confidence interval [HR CI 1.39; 2.01], heart failure (64% [HR CI 1.40; 1.91]), stroke (51% [HR CI 1.25; 1.83]) and a composite endpoint of cardiovascular events (62% [HR CI 1.46; 1.80]).14 This "dysglycemic legacy" can therefore have a profound effect on a patient's life and it is crucial that this is addressed. Recent studies show that people often remain above target for several years before treatment intensification. This is true of every step in the treatment pathway, but clinical or therapeutic inertia appears to be more pronounced when considering addition of insulin, particularly in insulin-naïve people. Reasons for this can be related to the healthcare professional and/or the person with diabetes, and differ depending on which stage of their treatment strategy a person is at. Poor glycemic control can be partly attributed to delayed initiation of insulin (initiation inertia), lack of dose adjustment (titration inertia) and delayed intensification (intensification inertia), all of which constitute therapeutic inertia. The evidence and reasons for inertia at these three steps are discussed in further detail below, together with the methods used to tackle barriers to insulin optimization. Approximately half of patients with type 2 diabetes (T2D) do not achieve globally recognized blood glucose targets, despite the availability of a wide range of effective glucose-lowering therapies. Failure to maintain good glycemic control increases the risk of diabetes-related complications and long-term health care costs. Patients must be brought under glycemic control to improve treatment outcomes, but existing barriers to optimizing glycemic control must first be overcome, including patient non-adherence to treatment, the failure of physicians to intensify therapy in a timely manner, and inadequacies in the healthcare system itself. The reasons for such barriers include treatment side-effects, complex treatment regimens, needle anxiety, poor patient education, and the absence of an adequate patient care plan; however, newer therapies and devices, combined with comprehensive care plans involving adequate patient education, can help to minimize barriers and improve treatment outcomes.

Title: INSULIN INITIATION: INDIVIDUALIZED APPROACH

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Diabetes is a progressive disease, and most patients will eventually need insulin to achieve euglycemia. Insulin is the primary treatment in all patients with type 1 diabetes mellitus. Type1DM requires initiation with multiple daily injections at the time of diagnosis. This is usually short-acting insulin or rapid-acting insulin analogue together with one or more daily separate injections of intermediate or long-acting insulin. Two or three premixed insulin injections per day may be used. Indications for exogenous insulin therapy in patients with type 2 diabetes mellitus include acute illness or surgery, pregnancy, severe hyperglycemia, contraindications to or failure to achieve goals

with oral antidiabetic medications, and there is always a need for flexible therapy. In type 2 DM, data have shown that early and aggressive intervention to lower blood glucose reduces the risk of complications of the disease. However, even with the ever-growing list of new medications available, it is a tremendous job of for healthcare providers to decide which treatment regimen is appropriate to manage a particular patient. New guidelines and algorithms can help determine which patients with type 2 diabetes should be started on insulin and when insulin should be initiated. The preferred method of insulin initiation in T2DM is to begin by adding a long-acting (basal) insulin or once-daily premixed/co-formulation insulin or twice-daily premixed insulin, alone or in combination with glucagon-like peptide-1 receptor agonist or non secretogouge antidiabetic drugs. If the desired blood glucose targets are not achieved, rapid-acting or short-acting (bolus or prandial) insulin can be added at mealtime to control the expected postprandial hyperglycemia. An insulin regimen should be adopted and individualized but should, closely resemble a natural physiologic state avoiding glycemic fluctuation. Cost-effectiveness, complexity of regimen and patient adherence must also be considered while initiating insulin.

Title: Dynamic Endocrine tests to assess the pituitary function

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The pituitary gland is a pea-sized gland that sits in the sellaturcica. The anterior lobe of the pituitary secret tropic hormones (such as growth hormone, adrenocorticotropic hormone, thyroid stimulating hormone, gonadotropic hormone and prolactin) which acts on peripheral endocrine glands. Posterior pituitary secret arginine-vasopressin and oxytocin which act on target tissues. Hormones produced by the pituitary gland have conventionally been measured in the serum by radioimmunoassay's (RIA), whereas more sensitive immunoradiometric assays (IRMA) have now been developed and are replacing RIA.Due to the pulsatile characteristic of the anterior pituitary hormone secretion, its involvement in the acute response to stress and feed-back mechanisms with hormones of peripheral glands, baseline circulating levels of many pituitary hormones may significantly overlap between normal subjects and patients with pituitary disease. Therefore, pituitary dynamic testing has been widely used for the diagnosis and follow-up of pituitary disease. Stimulatory tests are useful to determine whether there is sufficient hormone reserve when baseline levels low or normal. Stimulatory tests (such as Insulin tolerance test for growth hormone deficiency, short synacthen test for cortisol deficiency and water deprivation test for arginine-vasopressin) are used to evaluate hypo function of pituitary.Suppression tests (such as dexamethasone suppression test for adrenocorticotrophic hormone) are useful to determine whether elevated levels of baseline hormones are suppressible or not and used to investigate hyper function of pituitary gland.

Title: VIT D: WHETHER WE ARE IN RIGHT TRACK

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Vitamin D currently has become a key topic in patientmanagement.It is a fat-soluble steroid prohormone mainly produced photochemically in the skin from 7 dehydrocholesterol. Thetwo bioequivalent forms are, Vitamin D2 (ergocalciferol) obtainedfrom dietary vegetable sources and supplements& Vitamin D3 (cholecalciferol), obtained from skin exposure to ultraviolet Bray.It is required for bone and mineral homeostasis, and itprevents rickets and osteomalacia. Without vitamin D, only 10 to 15% of dietary calcium and about 60% of phosphorus is absorbed. As most tissues and cells in the body have a vitamin D receptor, new insights are that it can play role in decreasing the risk of many chronic illnesses, including common cancers, autoimmune diseases, infectious diseases, and cardiovascular disease.

Vitamin D status is usually assessed by the serum 25-hydroxyvitamin D (25(OH)D) concentration.D deficiency is defined as a 25-hydroxyvitamin D level less than 50 nmol per liter (20 ng per milliliter). Risk factors of deficiency in Bangladesh includes female gender, urbanization, obesity, dark skin complexion, wearing skin covering, veils, lifestyle factors (staying inside home) etc. Children (> 1yr) and adults require approximately 800 to 1000 IU per

day. One convenient way to correct D deficiency isby 50,000-IU capsule of vitamin D2 once a week for 8 weeks, followed by 50,000 IU of vitamin D2 every 2 to 4 weeks thereafter. In obese, patients with malabsorption, on medications affecting vitamin D metabolism, a higher dose may be needed

Further discussions needed regarding definitions of vitamin D sufficiency andinsufficiency, the relationship between 25-hydroxyvitamin D (25(OH)D)and parathyroid hormone, themeasurement to consider, (i.e., total vs. freedetermination), the utility of screening versus universal supplementation etc. As it can be easily assessed and rapidly managed, it is important to assess its prevalenceamong different cohorts of patients, as well as the efficacy of the supplementation.Public health-awareness campaigns, food fortification with vitamin D are efficacious and affordable means to prevent vitamin D deficiency.

Title: UPDATE OF HYPERPARATHYROIDISM MANAGEMENT

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Hyperparathyroidism results from excess parathyroid hormone (PTH) secretion from one or more of the four parathyroid glands, either from an intrinsic abnormal change altering excretion of parathyroid hormone (primary or tertiary hyperparathyroidism) or from an abnormal calcium homoeostasis affecting production of parathyroid hormone (secondary hyperparathyroidism). Asymptomatic disease is common. Severe disease with renal stones and metabolic bone disease arises less frequently. Primary hyperparathyroidism(PHPT) is common among endocrine disorders. A single benign parathyroid adenoma is the cause in most cases, however, multiglandular disease is not rare and is typically seen in familial PHPT syndromes.Hypercalcemia is the biochemical hallmark of PHPT.In Normocalcaemic PHPT, serum calcium level is normal but PTH levels are increased. Primary hyperparathyroidism can be treated by surgical removal of an adenoma. Medical management of mild disease is possible with bisphosphonates, hormone replacement therapy, and calcimimetics. Vitamin D deficiency is a frequency cause of hyperparathyroidism, particularly among elderly people. Secondary hyperparathyroidism that occurs due to chronic kidney disease is important in cause of renal bone disease. Tertiary hyperparathyroidism develops after long-term secondary hyperparathyroidism when the parathyroid glands becomes overactive and secrets high levels of parathyroid hormones that leads to high blood calcium levels. Hypercalcemia may be controlled with medical management but the definitive treatment is surgery.

Title: Glimpses of Modern Insulin with Technology

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Modern insulin includes Insulin analogues. Properties of Insulin analogues are structure of insulin is modified, pharmacokinetic properties modified to mimic physiology and molecular pharmacology of human insulin retained. Properties of an ideal mealtime (bolus) analogue are fast onset, short duration of action and predictability. Properties of an ideal basal analogue are long duration of action, flat profile (no peak) and predictability. Currently available insulin analogues are Rapid-acting analogues (Insulin Aspart, Insulin Lispro, Insulin Glulisine). Basal analogues are Insulin Detemir, Insulin Glargine and Insulin Degludec. Biphasic premixed analogues are Biphasic Insulin Aspart and Biphasic Insulin Lispro.Co-formulation of Insulin degludec and Insulin Aspart are also included in Insulin analogues. Properties of Insulin analogues are receptor affinity and mitogenicity (Mitogenic potency less than human insulin), Hypoglycaemia (Incidence lower than human insulin, both overall and nocturnal), Hypoglycemic awareness (Physiological responses were preserved and equivalent compared with human insulin), Immunogenicity (No antibodies production), Adverse events (less than human insulin).Properties of Biphasic premixed analogues are mimics physiological insulin release (Early release of rapid-acting insulin targets postprandial glucose and delayed release of intermediate-acting insulin fulfils basal insulin requirement), reduces hypoglycemic risk, improves HbA1c and simplifies dosing. Insulin technology includes Insulin pump. An insulin

pump is a small electronic device which provides a continuous infusion of very fast acting insulin into the subcutaneous tissue (under the skin). It is designed to deliver insulin in a way more similar to the pancreas of a person without diabetes, than insulin injections. The pump is programmable and the settings can be changed if required by activating the on-screen menus (patients/parents are trained how to change the settings). Insulin is delivered through an infusion set from the pump and a short plastic cannula which is changed every 2-3 days using a needle insertion set. All patients require a continuous infusion of fast acting insulin which act as basal (or background) insulin and there may be several different basal rate settings over the course of the day. Insulin boluses are required in addition to the basal insulin, when carbohydrate containingfoods/drinks are consumed. The bolus is given through the pump and the settings for the amount of insulin required for carbohydrate are pre-programmed into the pump.An insulin bolus is also required when the blood glucose reading is high and the amount of insulin required (correction factor) is programmed into the pump. These modern insulin and technology aids in better glycemic control and improving quality of life.

Title: Thyroid imaging.

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Abstract: Imaging has long been established as an essential element in the workup of clinically suspected lesions of the thyroid gland. Knowledge of the normal and abnormal imaging appearances of the thyroid gland is essential for appropriate identification and diagnosis of thyroid diseases. Ultraso¬nography is the modality of choice for initial characterization of a thyroid nodule. Thyroid nodules are often detected in¬cidentally at computed tomography, magnetic resonance imaging and positron emission tomography; however, ultrasonography is the most informative imaging modality for characterization of these nodules. Grey scale ultrasonography with color Doppler and sonoelastography play excellent role in evaluation of thyroid nodules, thyroiditis and thyrotoxicosis. Ultrasound characteristics that increase the likelihood of malignancy in a thyroid nodule include microcalcifications, solid composition, central vascularity and hard tissue pattern in sonoelastography.Color Doppler measurement of peak systolic velocity of inferior thyroid artery helps to distinguish thyroiditis from thyrotoxicosis. Nuclear scintigraphy is com¬monly used for evaluation of physiologic thyroid function and for identification of metabolically active and inactive nodules. When fine-needle aspiration biopsy of a lesion is indicated based on clinical and radiologic features, appropriate ultrasound-guided biopsy technique and careful cytologic analysis are crucial for making the diagnosis.

Abstract Number: BES_ABS_01

Title: CARDIOMETABOLIC RISK IN OVERWEIGHT AND OBESE CHILDREN IN BANGLADESH

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Introduction: Childhood obesity is increasing dramatically and represents an important public health issue due to associated metabolic and cardiovascular co-morbidities. Very limited data are available regarding cardio-metabolic risk factors among this group in Bangladesh.

Objectives: To observe the cardio-metabolic risk factors in overweight and obese children.

Methods: This cross-sectional study was carried out in 88 overweight and obese children recruited consecutively by using CDC percentile chart for body mass index (BMI) in children over a period of 15 months. After completing a

questionnaire and relevant clinical examination, blood was collected for fasting plasma glucose (FPG), insulin, HbA1c, lipid profile and C- reactive protein (CRP). Homeostasis Model Assessment of Insulin Resistance (HOMA-IR) was used to determine insulin resistance.

Results: Central obesity (100%), dyslipidaemia (88.6%), raised CRP (81.8%) and metabolic syndrome (69.3%) were the most common cardio-metabolic risk factors. Children with grade 3 obesity had significantly higher systolic blood pressure (115.57±11.60 vs. 105.71±8.84 mmHg, p=0.043) and insulin resistance (7.15±4.97 vs. 3.53±2.04, p= 0.017) than grade 1 obesity. Blood pressure, insulin resistance and CRP increased while high density lipoprotein (HDL) decreased with increasing severity of obesity. BMI z score was a significant predictor of systolic blood pressure, waist circumference was an independent predictor of diastolic blood pressure and HDL, waist height ratio best predicted insulin resistance, CRP and total cholesterol in overweight/obese children.
Conclusions: We have observed a high frequency of cardio-metabolic risk factors in overweight and obese children and they increased worsened with increasing grade of obesity.

Abstract Number: BES_ABS_02

Title: SERUM ZINC LEVEL IN PERSONS WITH PREDIABETES AND ITS RELATION WITH GLYCEMIC STATUS ATTENDING TERTIARY CARE HOSPITAL IN BANGLADESH

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Affiliation(s):

Background: Variable level of serum zinc has been observed in persons with prediabetes and type 2 diabetes mellitus (T2DM), but poorly studied in Bangladesh.

Objectives: Estimation of serum zinc level and establishment of its relation with glycemic status in individuals with prediabetes.

Methods: This cross-sectional study encompassed 126 (age: 35.09±9.96 years, mean±SD; Sex: 16/110, M/F) subjects with prediabetes and 126(age: 29.08±9.28 years, mean ±SD; Sex: 22/104, M/F) healthy nondiabetic controls from the out-patient department of Endocrinology, BSMMU consecutively. Serum zinc was measured by using Atomic Absorption Spectrophotometry. Height, weight, waist circumference, acanthosis nigricans, hypertension, s. SGPT & serum creatinine were recorded as confounding variables.

Results: Serum zinc level in persons with prediabetes was lower than that in control (0.76±0.01 vs. 0.78±0.01mg/L, M±SEM, p=0.28). There was statistically significant difference for zinc level in gender groups (M vs. F: 0.84±0.02 vs. 0.75±0.01 mg/L, M±SEM, p<0.001) and monthly family income groups (p=0.02). Also zinc level was statistically similar among glycemic status groups apart from zinc level in between control and combined glucose intolerance (CGI) groups (control vs. CGT: 0.78±0.01 vs. 0.72±0.02mg/L, M±SEM, p=0.03).Among cases comparisons between groups with or without risk factors like: smoking (0.72±0.03 vs. 0.76±0.10 mg/L, p=0.42), smokeless tobacco (0.73±0.03 vs. 0.76±0.01mg/L, p=0.46), hypertension (0.80±0.03 vs. 0.75±0.01 mg/L, p= 0.14), family history of DM (0.75±0.02 vs. 0.77±0.02mg/L, p=0.52), family history of CVD (0.74±0.02 vs. 0.77±0.01mg/L, p=0.28), over-weight (0.76±0.01 vs. 0.74±0.05mg/L, P=0.59), waist circumference (0.75±0.01 vs. 0.79±0.04mg/L, p=0.40) and acanthosis nigricans (0.75±0.02 vs. 0.76±0.02mg/L, p=0.70), showed no statistically significant difference. None of the variables like age (r= -0.02, p=0.19), BMI (r= 0.14, p=0.12), FPG (r= -0.05, p=0.60) and PG 2h after 75g glucose (r=0.10, p=0.28), HbA1c (r=0.04, p=0.64), serum creatinine (r=0.01, p=0.87) showed significant relationship with the level of zinc except SGPT which showed significant relation with zinc among cases (r= 0.28, p=0.002) and among all participants (r=0.17, p=0.008) but not in control group (r=0.07, p=0.43).

Conclusions: It is concluded that persons with prediabetes had serum zinc level within normal limit and there was found no statistically significant relationship between HbA1c and zinc.

Abstract Number: BES_ABS_03

Title: FREQUENCY AND RISK FACTORS FOR DIABETIC NEPHROPATHY AMONG NEWLY DIAGNOSED TYPE 2 DIABETIC SUBJECTS: A PRELIMINARY REPORT

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Introduction: Patients with type 2 diabetes mellitus (T2DM) pass through pre-diabetic stages and during diagnosis50% may have different chronic complications including diabetic nephropathy (DN).

Objectives: To evaluate frequency and risk factors for DN among newly detected T2DM subjects.

Methods: A case-control study was done at BIRDEM General Hospital, Dhaka, Bangladesh from October 2016 to June 2017. Newly detected (<3 months), adult (≥18 years) T2DM patients, who underwent test for urine albumin-to-creatinine ratio (UACR) at least twice, at least 6 weeks apart in 6-month period, were included in this study. Patients with diagnosed kidney disease, glomerulonephritis, recent fever and exercise, urinary tract infection and pregnancy were excluded. Patients with UACR ≥30 mg/g in at least two (of three, if done) samples were cases and those with UACR <30 mg/g were controls.

Results: Total patients were 100, including 35 cases [microalbuminuria (UACR=30-299 mg/g)=33 and overt proteinuria (UACR≥300 mg/g)=2] and 65 controls. Mean age was 46.6±12.3 years with2:1 female predominance. Twenty five percent patients were smokers, 48% were hypertensive and 39% had dyslipidaemia. Seventy four percent had family history of diabetes and 37% had family history of DN. Mean body mass index (BMI) was 26.3±2.9 kg/m2. Mean fasting blood glucose (mmol/L), 2-h post glucose value (mmol/L) and mean glycated haemoglobin (HbA1c) (%) were 9.2±2.9, 14.5±4.1 and 7.9±1.3 respectively. Family history of diabetes (OR=1.62, p=0.0001) and DN (OR=25.13, p=0.003), presence of hypertension (OR=4.93, p=0.001) and coexisting diabetic retinopathy (OR=14.18, p=0.046) were significant risk factors for DN. On multivariate logistic regression, family history of diabetes (OR=1.77, p=0.001) and DN (OR=24.31, p=0.001), higher BMI (>25 kg/m2) (OR=2.11, p=0.013), hypertension (OR=4.31, p=0.003) and retinopathy (OR=14.09, p=0.021) appeared significant.
Conclusions: One-third of new T2DM patients had DN and family history of diabetes and DN, higher BMI, hypertension and diabetic retinopathy were significant risk factors for DN.

Abstract Number: BES_ABS_04

Title: ADRENAL HISTOPLASMOSIS IN BANGLADESH

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Introduction: Histoplasmosis is an uncommon disease in Bangladesh. Histoplasmosis often mimics tuberculosis clinically and radiologically. Though adrenal gland is a characteristic site of involvement by Histoplama capsulatum infection, such cases are rarely reported in/from Bangladesh.

Objectives: To describe socio-demographic characteristics, clinical presentation, diagnostic investigations,

treatment and outcome of adrenal histoplasmosis in Bangladesh.
Methods: In this systematic review, we included all published articles between 1962 and 2018 containing information of adrenal histoplamosis in/from Bangladesh. Systematic literature search was performed through "PUBMED" and "BanglaJoL" by using key words "adrenal histoplasmosis", "Bangladesh" and "Histoplasma capsulatum". Unpublished but well documented cases were also included. Cases with inadequate information and repetition were excluded.

Results: Total patients were 14 (published 11, unpublished 3) and all were male, aged 32-75 years. Three were cultivators and six were diabetic. All tested negative for antibody against human immunodeficiency virus. Fever (12), anorexia (13), weight loss (14), cough (5), anaemia (7), hepato/hepato-splenomegaly (5) and increased pigmentation (3) were common features. All patients had bilateral adrenal enlargement on abdominal ultrasonography and computed tomography. Diagnosis was confirmed by fine needle aspiration cytology from adrenal gland(s) in all cases (14), culture of aspirated adrenal tissue (1) and anti-histoplasma antibody (2). Four patients had partial adrenal insufficiency. Six patients were prescribed anti-tuberculosis drugs empirically. Treatment consisted of amphotericin B followed by itraconazole (7) or itraconazole alone (4). In three cases documentation for treatment was not available. One patient expired (with recurrence involving the brain), 10 patients were improving at the time of their last follow-up and outcome of three patients could not be ascertained.
Conclusions: Though histoplasmosis is uncommon in Bangladesh, it is not impossible to have bilateral adrenal masses due to histoplasmosis. Physicians should be aware of the condition and histoplasmosis should be considered as a differential in appropriate clinical scenario.

Abstract Number: BES_ABS_05

Title: FREQUENCY AND PREDICTORS OF CO-MORBID DEPRESSION IN POLYCYSTIC OVARY SYNDROME

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Background: Women with polycystic ovary syndrome (PCOS) often suffer from psychiatric co-morbidities including depression. Data regarding the prevalence of depression in Bangladeshi PCOS women are scanty.
Objectives: This study was conducted to find out the frequency of depression in PCOS subjects and to identify the risk factors of depression among them.

Methods: The current cross-sectional study was done in the Endocrinology department of a tertiary hospital of Bangladesh and evaluated 200 newly diagnosed PCOS patients aged 18-45 years diagnosed as per Revised Rotterdam criteria; 200 healthy non-PCOS controls were included for comparison. Depression was assessed by administering the PRIME-MD Patient Health Questionnaire (PHQ-9). PHQ-9 score ≥ 10 was considered as the threshold for major depression and a score <5 was labeled to have no depression.

Results: The frequencies of major depression in PCOS and control groups were 51% and 19% respectively. The PCOS women had 5.12-fold risk of major depression in comparison to the controls. PCOS women having prediabetes/diabetes had a higher risk of major depression than those with normal glucose tolerance, and those with normal level prolactin had a higher risk than those with hyperprolactinemia. Age, marital status, obesity, hypertension, menstrual irregularity, hirsutism, acne, dyslipidemia, serum testosterone, and serum TSH levels had no significant influence on the presence of depression.

Conclusions: Depression is common in Bangladeshi PCOS patients; screening for depression should be done routinely in such patients for optimum management.

Abstract Number: BES_ABS_06

Title: FASTING C-PEPTIDE AND INSULIN RESISTANCE/SENSITIVITY OF GDM: OBSERVATION IN BANGLADESHI WOMEN

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Background: Gestational diabetes mellitus (GDM) is an important issue. Role of insulin resistance and secretory defect to cause GDM is not yet precisely settled.

Objectives: To determine insulin resistance (HOMA-IR, HOMA-B and HOMA-%S) and C-peptide as marker of insulin secretion in GDM.

Methods: This cross sectional, observational study encompassed120 pregnant women. Following WHO 2013 criteria for diagnosis of GDM 64 were found to be GDM and 56 normal glucose tolerance (NGT). Fasting blood glucose was determined by glucose oxidase method, insulin by ELISA and C-peptide by immunochemiluminescent method where as insulin indices were calculated by using HOMA-IR, HOMA-B and HOMA-%S.
Results:

In 59 subjects C-peptide were below the detection limit of assay kit (<0.100) and value of the rest (61) ranged between 0.19 - 0.41ng/ml. The calculated HOMA-IR, HOMA-B and HOMA-S were (1.66–2.12), (124.16 - 172.49) and (66.13–114.28) respectively. Fasting blood glucose [GDM vs. NGT (5.11 – 5.44) vs. (4.33 – 4.54); (p=<0.001)] were higher in GDM than those of NGT. Insulin and C-peptide [GDM vs. NGT; (8.07 – 10.79) vs. (6.09 – 9.02) (p= 063); (0.17 – 0.9) vs.(0.13 –0.39); (p=0. 541)] were also higher in GDM than that of NGT. HOMA-IR of GDM was higher [(1.89 – 2.58) vs. (1.22 – 1.77); (p=<0.001)] but HOMA-B [(99.73 – 141.39) vs. (134.90 – 226.39); (p=0. 013)] and HOMA-S [(52.14 – 71.41) vs. (72.83 –172.55); (p=0.012)] of GDM were lower than that of NGT. Logistic regression equation using age, BMI, family history of DM, duration of pregnancy and HOMA-B as covariate revealed that BMI(p=0.007) and HOMA- B(p=0.006) independently influence over development of GDM.

Conclusions: Both insulin resistance and reduced insulin sensitivity are important factors for development of GDM in our population.

Abstract Number: BES_ABS_07

Title: PREOPERATIVE CLINICAL, HORMONAL AND RADIOLOGICAL PROFILE OF PATIENTS WITH SELLAR MASSIN A REFERRAL NEUROSCIENCE INSTITUTE IN DHAKA

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Background: Mass in the sellar region represents diverse group of tumors with variable clinical manifestations,

hormone secretion pattern and radiological appearance.
Objectives: To assess the preoperative clinical, hormonal and radiological profile of patients undergoingsurgery for sellar mass in National Institute of Neurosciences (NINS) and Hospital, Dhaka.

Methods: This retrospective study included 30 patients (20 female, 10 male; age 32.4±8.7 years; mean±SD) with sellar mass undergoing surgery in NINS during 2017-2019 by non-probability purposive sampling. Demographic data, clinical manifestations, preoperative hormonal and radiological test results were obtained from medical records.

Results: Thirteen (43.3%) participants had hormone hypersecretion (9 growth hormone, 4 porlactin) and rest either non-functining pituitary adenoma (14; 46.7%) or other tumors (3; 10%; 2 meningioma, 1 craniopharyngioma). The median duration of symptoms was 1 year (interquartile range 6-25 months). Almost all patients hadheadache and visual field defect (90% and 87% respectively).Mean largest diameter of tumors was 3.2 cm (95% CI 2.7-3.7), whereas 8(26.7%) had giant tumors(largest diameter >4 cm).Suprasellar extension was present in 26 (86.7%), parasellar in 17 (56.7%) and infrasellar in 1 (3.3%). Basal cortisol was low in 10 (33.3%). Secondary hypothyroidism and hypogonadism was present in 3 (10.0%) and 14 (46.7%) respectively. None had preoperative diabetes insipidus.

Conclusions: Patients undergoing surgery for sellar mass in NINS had fairly large tumor size, suprasellar extension and variable hormonal abnormality. Dynamic tests arenot routinely done before surgery which are crucial in endocrine evaluation.

Abstract Number: BES_ABS_08

Title: SARCOMATOID CARCINOMA OF ADRENAL GLAND, A RARE CASE
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Background: Adrenal sarcomatoid carcinoma are very rare aggressive malignant tumor containing both epithelial (carcinomatous) & mesenchymal (sarcomatous) components. Only 19 cases are reported till date. The prognosis is very poor and 1 year mortality rate is 100%. Presentation may be non-functional or functional (features of hypercortisolism, hyperaldosteronism, hyperandrogenism, medullary hyperfunction)
Case Description: Our case was37-year-old female recently diagnosed case of hypertension presented with 3 months history of facial swelling, weight gain, paroxysmal palpitation, hirsutism and right hypochondriac pain. She had cushingoid appearance. Hormonal evaluation revealed raised mid night salivary cortisol, non suppressive dexamethasone suppression test, raised urinary and serum aldosterone , and upper limit of 24 hours urinary metanephrine and normal androgen. CT scan of abdomen was suggestive of right sided adrenal carcinoma or pheochromocytoma (10 x 8 cm) . Histopathology after right sided adrenalectomy showed adrenocortical sarcomatoid carcinoma.

Conclusions: Adrenal malignancy should be considered in a patient presenting with a large adrenal mass (>4 cm in diameter) along with the features of hypersecretion of multiple hormones (ex. Cortisol, aldosterone, medullary hormone in combination or individual) within a short period of time.

Abstract Number: BES_ABS_09

Title: COMMUNITY GROUPS OR MOBILE PHONE MESSAGING TO PREVENT AND CONTROL TYPE 2 DIABETES AND INTERMEDIATE HYPERGLYCAEMIA IN BANGLADESH (DMAGIC): A CLUSTER-RANDOMISED CONTROLLED TRIAL

Fottrell E[1], Ahmed N[2], Morrison J[1], Kuddus A[2], Shaha SK[2], King C[1], Jennings H[1], Akter K[2], Nahar T[2], Bidgoli HH[1], Khan AKA[2], Costello A[1], Azad K[2]

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Background: Strategies are needed to prevent and control type 2 diabetes and intermediate hyperglycaemia, which together affect roughly a third of adults in Bangladesh.

Objectives: We aimed to assess the effects of community mobilisation and mHealth on the prevalence of intermediate hyperglycaemia and diabetes among the general adult population in rural Bangladesh, and to assess the effect of these interventions on the incidence of type 2 diabetes among people with intermediate hyperglycaemia within the study population.

Methods: DMagic Trial was a three-arm, cluster-randomised trial of participatory community mobilisation, mHealth mobile phone messaging, and usual care (control) in 96 villages in Faridpur. Community mobilisation involved 18 monthly group meetings, led by lay facilitators, applying a participatory learning and action (PLA) cycle focused on diabetes prevention and control. mHealth involved twice-weekly voice messages over 14 months promoting behavior change to reduce diabetes risk. Primary outcomes (combined prevalence of type 2 diabetes and intermediate hyperglycaemia) were assessed through fasting blood glucose concentrations and 2-h oral glucose tolerance tests among a cross-section of adults aged 30 years and older and a cohort of individuals identified with intermediate hyperglycaemia. Prevalence findings are based on a cross-sectional survey at the end of the study; incidence findings are based on 2-year follow-up survey of a cohort of individuals identified with intermediate hyperglycaemia through a cross-sectional survey at baseline.

Results: There was a large reduction in combined prevalence of type 2 diabetes and intermediate hyperglycemia in the PLA group compared with control group at the end of the study with an absolute reduction of 20•7%. End-of study prevalence was assessed in 11 454 individuals and incidence in 2100 individuals. Among 2470 adults with intermediate hyperglycemia at baseline, 2100 (85%) were followed-up at 2 years where cumulative incidence of diabetes in this cohort was significantly lower in the PLA group compared with control, representing an absolute incidence reduction of 8•7% .

Conclusions: Our data provide strong evidence to support the use of community mobilisation based on PLA to prevent type 2 diabetes in this rural Bangladeshi population. Despite raising knowledge and awareness of diabetes, the mHealth intervention did not change disease outcomes in our population. Replication studies in other populations should be a priority.

Abstract Number: BES_ABS_10

Title: THE RELATIONSHIP BETWEEN VITAMIN D DEFICIENCY, HAEMOGLOBIN A1C AND THEIR ASSOCIATION WITH MICROVASCULAR AND MACROVASCULAR COMPLICATIONS IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

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Affiliation(s):

Background: Vitamin D deficiency is considered to be potential risk factor for developing diabetes and associated vascular complication in several studies.

Objectives: We investigated the diabetic patients with vitamin D deficiency and assessed the correlation between HbA1c, microvascular and macrovascular complications.

Methods: In this retrospective, cross-sectional study we evaluated data of 100 patients from medical records who were admitted in Endocrinology department of BIRDEM from January-June,2018. All of them were Type 2 diabetic patients and subsequently diagnosed with vitamin D deficiency. After fulfilling selection criteria 57 patients were included in the study. The correlation between 25(OH) vitamin D level, HbA1c and both microvascular and macrovascular complications were explored.

Results: Among the study population with a mean age of 54.77, 40 patients(70%) were found to be Vitamin D deficient(<20ng/ml) and they were mostly female(72%).Nephropathy was the most frequent microvascular complications found in 22(38.6%)patients and 21(36.8%) patients had Ischaemic heart disease which was the most common macrovascular complications. A significant negative correlation was found between Vitamin D level and HbA1c(P=0.045).In multivariate analysis, although no correlation was found between HbA1c and development of vascular complications but low vitamin D level was significantly associated with development of neuropathy(P=0.010).

Conclusions: The findings of the study indicates that Vitamin D deficiency is inversely related to glycaemic status and possibly also responsible for the development of neuropathy.

Abstract Number: BES_ABS_11

Title: BENEFICIAL EFFECTS OF A FOUR MONTHS EXERCISE REGIMEN FROM PRE-DIABETES IN THE PREVENTION OF HIPPOCAMPAL SPATIAL MEMORY DYSFUNCTION IN EARLY TYPE 2 DIABETES

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Background: Type II diabetes mellitus (DM2) is associated with an increased risk of cognitive dysfunction and dementia (Alzheimer's disease and vascular dementia). Pre-diabetes represents an elevation of plasma glucose above the normal range but below that of clinical diabetes. Even with pre-diabetes, when compared with a normoglycemic population, are at increased risk of cognitive decline as well.

Objectives: The present study aimed to investigate whether the progression of spatial memory impairment is prevented with a 4 months exercise intervention started from pre-diabetes stage in an established model of type 2 DM rat.

Methods: OLETF rats, an established model of human type 2 DM, were bought at pre-diabetes stage and Long Evans Tokushima rats (LETO) were used as genetic control. LETO and OLETF rats then underwent Morris Water Maze test and OGTT. Then these rats started treadmill exercise from pre-DM stage either in mild or moderate form for four months, memory assessment, DM assessment and other experiments including molecular analysis was

done.
Results: Significant dysfunction in hippocampal spatial memory learning and retention was observed in pre-diabetes stage of OLETF type 2 DM rats, accompanied with down regulated hippocampal MCT-2 level without alteration in hippocampal glycogen level. Four months mild or moderate exercise from pre-diabetes was effective in amelioration of progression in spatial memory dysfunction, in significant normalization of blood glucose, HbA1c and plasma insulin levels, down regulated hippocampal MCT-2-glycogen pathway in early DM. Among several neuroplastic factors investigated, only BDNF was significantly altered in current experimental setting in hippocampus in early DM and was ameliorated with four months exercise regimen from pre-diabetes.
Conclusions: A four months exercise regimen from pre-diabetes either in mild or moderate form is effective to arrest the progression of memory dysfunction with the improvement of down regulated MCT-2-glycogen pathway in morphologically intact hippocampus in early type 2 DM with insulin resistance.

Abstract Number: BES_ABS_12

Title: CARDIOMETABOLIC RISK OF LEAN POLYCYSTIC OVARY SYNDROME
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Background: Polycystic Ovary Syndrome (PCOS) is a complex syndrome of insulin resistance, commonly affecting women of reproductive age.

Objectives: To observe cardiovascular risk in lean PCOS.

Methods: This cross sectional comparative study include women with PCOS (N=104; age, mean±SD: 22.4±4.7 years;) on basis of Rotterdam criteria. Cases were divided into 2 groups on the basis of body mass index (BMI), the lean PCOS with BMI < 23 kg/m2 (N=44) and non-lean PCOS with BMI ≥ 23kg/m2 (N=60).47 healthy control (age, mean±SD: 22.9±4.2 years; BMI: 20.7±3.5 Kg/m2) were studied for insulin, lipid profile (by chemiluminescent immunoassay) and glucose (by glucose-oxidase method).
Results:

Waist circumference, hip circumference and Ferriman Gallwey scoring (lean vs. non-lean PCOS: 74.62±6.37 vs. 88.78±10.10; p<0.000; 92.32.77±8.07 vs. 114.16±11.48; p<0.000; 9.7±3.11 vs. 11.27±1.16; p<0.000) were significantly differed.HDL and HOMA-IR (Lean vs. non-lean PCOS, 46.28±6.9 vs. 38.15±7.80 mg/dl; p<0.000; 2.95±1.8 vs. 4.26±2.8; p<0.000) were found significantly high in non-lean PCOS than lean PCOS. Frequency of HTN and low HDL (Lean vs. non-lean PCOS: 18.8% vs. 81.3%; p<.003; 33.7% vs. 66.3%; p<.001) were significantly high in non-lean PCOS. Hormonal profile did not differ except serum Prolactin (Lean vs. non-lean PCOS: 12.71±6.03 vs. 15.06±10.90; p<.017) which was significantly high in non-lean PCOS. But, LDL, HDL, TG, fasting insulin, HOMA-IR, systolic blood pressure, 2 hour after glucose (Lean PCOS vs. lean control: 105.85±22.78 vs. 94.11±19.76 mg/dl; p<0.036; 44.88±8.55 vs. 49.21±8.78 mg/dl; p<0.001; 114.66±48.69 vs. 85.78±32.88 mg/dl; p<0.001; 16.95±16.88 vs. 7.67±3.02 µU/ml; p<0.002; 2.98±2.34 vs. 1.33±52; p<0.000, 114.74±12.98 vs. 102.10±12.11 mmHg; p<0.02; 7.11±1.20 vs. 5.78±1.33; p<0.009) were significantly high in lean PCOS than control.

Conclusions: Lean women with PCOS should also be screened for cardio-metabolic risks.

Abstract Number: BES_ABS_13

Title: MAJEWSKIOSTEODYSPLASTIC PRIMORDIAL DWARFISM TYPE II (MOPD-II):A RARE CASE REPORT

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Introduction: Majewskiosteodysplastic primordial dwarfism type II (MOPD-II) is a rare syndrome characterized by the presence of intrauterine growth restriction, post-natal growth deficiency and microcephaly. Individuals affected by this disease present at an adult height of less than 100cm, a post-pubertal head circumference of 40cm or less, mild mental retardation, an outgoing personality and skeletal dysplasia, renal, hematopoietic abnormalities, cerebral vascular anomalies (aneurysm and Moyamoya disease). It is an autosomal recessive syndrome with equal gender occurrence involving the DNA damage-response PCNT gene.

Case Description: Here is an interesting case report of a 15-year-old boy presented with growth failure since age of one year, noticed by his parents with history of low birth weight(1.5kg), delayed developmental milestones, microcephaly, low IQ and difficulty in walking due to short left leg. He had bird like head with beaked nose, crowding of teeth and malocclusion. Complete blood picture and hormonal analysis are within normal range except low growth hormone, typical radiographic features including severe scoliosis and dislocation of hip correlated with MOPD-II.

Conclusions: Growth hormone therapy was thought to be ineffective. Genetic counseling is important to prevent the occurrence of MOPD-II.

Abstract Number: BES_ABS_14

Title: ESTROGEN/ESTROGEN RECEPTORS PLAY A CRUCIAL ROLE IN ALTERATION OF CARDIAC VEGF SYSTEM IN DIABETIC ANIMAL MODEL

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Background: We previously demonstrated that estrogen receptors especially estrogen receptor alpha plays crucial role in maintaining coronary microcirculation and vascular endothelial growth factor (VEGF) signaling in female heart. In our series of studies, we found that loss of VEGF from early diabetes is the initial trigger for all the structural and functional changes responsible for diabetic retinopathy.
Objectives: In this present study, we tried to clarify how estrogen/estrogen receptor affects coronary VEGF signaling in diabetic model.

Methods: We induced both types of diabetes (type 1 and type 2) in estrogen receptors knockout (ERKO) female mice. In addition we also induced diabetes in female rat with or without ovariectomy.
Results: We found that, VEGF angiogenic signaling is much more decreased in ovariectomized female rat heart in

presence of diabetes compared to the absence of diabetes which has direct correlation with the functional impairment of heart. The induction of diabetes in ERαKO female mice has more detrimental downregulation of cardiac VEGF angiogenic signaling compared to ERαKO mice without diabetes. Whereas, the streptozotocin administration in ERβKO female mice could not further worsen the VEGF angiogenic signaling in heart compared to ERβKO female mice heart without diabetes. Diabetes induction in ERαKO female mice has further worsened the cardiac function compared to ERαKO mice without diabetes. This cardiac functional impairment has not been clearly evident in streptozotocin administered ERβKO female mice compared to ERβKO female mice heart without diabetes. We have also observed similar types of findings in type two diabetic ERKO mice. In ERαKO type two diabetic mice, cardiac VEGF expression is much more decreased than ERαKO mice without diabetes.

Conclusions: Presence of diabetes affects cardiac VEGF system in estrogen depleted female subject more significantly compared to non-diabetic subjects and estrogen receptors alpha has predominant role in downregulating the cardiac VEGF level in diabetic female subjects.

Abstract Number: BES_ABS_15

Title: DISRUPTION OF VEGF ANGIOGENIC SIGNALING SYSTEM IN METABOLIC SYNDROME SUBJECTS IN RURAL BANGLADESHI WOMEN

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Introduction: Metabolic syndrome (MetS) is associated with impaired angiogenesis, a process that is chiefly regulated by vascular endothelial growth factor (VEGF) upon binding to its specific receptors, VEGF-R1 and VEGF-R2. VEGF is a key architect of both of vascular processes, i.e., angiogenesis and vasculogenesis, by acting as an activator and survival factor for endothelial cells in newly formed blood vessels. The effects of VEGF are mediated by two receptors, namely VEGF-R1 and VEGF-R2. Soluble iso forms of VEGF receptors named sVEGFR-1 and sVEGFR-2 are detected in blood circulation and known to act as anti-VEGF agents.

Objectives: The purpose of the present study was to assess trends or patterns in plasma levels of VEGF and its soluble receptors in subjects with (MetS) or without (non-MetS) MetS; and further examine their association with clinical or metabolic parameters using a subpopulation of South Asian country.

Methods: The present study is a community-based cross-sectional study performed on women from rural Bangladesh. A total of 1802 participants aged ≥15 years were selected using the stratified multistage random sampling. This sample size (1802) was sufficient to test all our formulated research hypotheses at the 5% level of significance, with a power of 80% (β=0.20). We used the World Health Organization's (WHO) STEPS approach (modified), which entails a stepwise collection of the risk factor data.

Results: Plasma levels of VEGF were found to be significantly increased (MetS vs. non-MetS: 483.9 vs. 386.9, $p<0.001$), whereas, the soluble forms of VEGF receptors, sVEGF-R1 and sVEGF-R2, were significantly decreased in subjects with Mets (sVEGF-R1, MetS vs. non-MetS: 512.5 vs. 631.3, $p<0.001$; sVEGF-R2, MetS vs. non-MetS: 9,302.8 vs. 9,787.4, $p=0.004$). After adjustment for age and all potential variables, multiple regression analysis revealed that plasma levels of VEGF had significant positive association with blood glucose ($p = 0.019$) and body mass index ($p = 0.007$). We also found that mean plasma levels of VEGF increased in direct proportion to levels of MetS components.

Conclusions: The present study is the first ever to demonstrate a positive association between trends in levels of plasma VEGF and MetS using a large sample size from South Asia. The association between plasma VEGF and MetS needs further investigations in order to clearly decipher the clinical predictive value and accuracy of plasma VEGF in MetS.

Abstract Number: BES_ABS_16

Title: DIFFERENT TYPE 2 DIABETES RISK ASSESSMENTS PREDICT DISSIMILAR NUMBERS AT 'HIGH RISK': A CROSS-SECTIONAL ANALYSIS OF DIABETES RISK-ASSESSMENT TOOLS.

Akter N1

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Background: Use of a validated risk-assessment tool to identify individuals at high risk of developingtype2 diabetes is currently recommended. It is under-reported, however, whether a different risk tool alters the predicted risk of an individual.

Objectives: This study explored any differences between commonly used validated risk-assessment tools for type 2 diabetes.

Methods: This was a single-center, cross-sectional study conducted between July 2018 and June 2019 in the medicine outpatient department of a tertiary care hospital in Dhaka, Bangladesh. 518 non-diabetic subjects, aged 22–68 years were included in the current study. The risk of developing type 2 diabetes was assessed using two different risk scores, including clinical data.

Results: Differences between the risk-assessment tools were apparent following cross-sectional analysis of individuals. IDRS (Indian Diabetes Risk Score) categorized37.8 % of individuals at 'high risk' followed by Finish Diabetes Risk Score (FINDRISC) (8.3%). Following further analysis by sex, 14.9% of males and 23.0% females were categorized at high risk using IDRS, whereas 1.9% of males and 6.4 % females were categorized as high risk using FINDRISC.

Conclusions: The adoption of a different valid risk assessment tool can alter the predicted risk of an individual and caution should be used to identify those individuals who really are at high risk of type 2 diabetes. To adequately prevent type 2 diabetes, risk scoring systems must be validated for each population considered.

Abstract Number: BES_ABS_17

Title: IMPROVEMENT OF CIRCULATORY LOW HDL LEVEL IN BANGLADESHI POPULATION THROUGH A SHORT TERM LIFE STYLE INTERVENTION PROGRAM OF DAILY WALKING

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Introduction: Non-communicable disease (NCD) is now a burning public health issue in Bangladesh. Among crucial NCD risk factors, low HDL (high density lipoprotein),prevalence occupies the top position in Bangladesh.

Over last seven years through nationwide extensive investigation in Bangladesh, we found that more than 70% apparently healthy population in Bangladesh has low HDL level, which is the serious warning issue and risk factor for the coronary heart diseases and diabetes development in Bangladesh.

Objectives: The present study investigated whether a life style intervention program through daily walking could improve low HDL level in Bangladeshi apparently healthy population.

Methods: In the current study, we included 102 subjects with low HDL who are apparently healthy in a cohort and assessed NCD risk factors after 6 weeks daily walking program (twice daily, 1.5km walking each time), this exercise program was designed through the discussion with study participants.

Results: Among all the NCD risk factors assessed, BMI, waist circumference, diastolic pressure were decreased significantly after 6 weeks daily walking program while HDL level has increased significantly with a p value of 0.001. This study is still ongoing.

Conclusions: Physical inactivity is a big issue in Bangladesh in recent days and the current research findings show that even a 6 weeks mild exercise program (daily walking) improves low HDL level in Bangladeshi population which can be a potential and promising strategy for the prevention of NCD in Bangladesh.

Abstract Number: BES_ABS_18

Title: IMPACT OF STRUCTURED DIABETES EDUCATION ON ACHIEVING GLYCEMIC CONTROL IN PATIENT WITH UNCONTROLLED DIABETES MELLITUS ADMITTED IN TERTIARY CARE HOSPITAL OF BANGLADESH.

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Background: Diabetes education and lifestyle modification are critical components in controlling blood glucose levels of people with diabetes mellitus. Despite abundant study focused diabetic epidemiology and its complications, very few studies in Bangladesh emphasis the role of structured diabetes education and its effect on glycemic control.

Objectives: The study was to observe the impact of structured diabetes education on achieving glycemic control in patient with uncontrolled Diabetes Mellitus admitted in tertiary care hospital.

Methods: This interventional study was carried out from September2017 to August 2018, following ethical approval at the in-patient department of Endocrinology, BIRDEM General Hospital, Dhaka. Total 100 adult diabetic populations of all socioeconomic strata admitted in the study sit. The study population was subdivided into 'Case or intervention group (GI)' and 'Control (GC)' by purposive sampling. Status of diabetic education were evaluated by pretest (questionnaire) and scored out of 10. Structured diabetic education was provided to interventional group by investigator with interactive elaborate discussion. Post-test evaluation was done and after 3 months glycemic status was evaluated for all the patients.

Results: Among the participants, mean age of GI and GC were50.10±12.26 and 53.44±8.59 respectively, with slight predominance of female in both group (GI: 54% female vs. 46% male and GC: 60% female vs. 40% male). Educational qualifications, occupations, and monthly income were similar across the group (P>0.05). Mean duration of DM in GI and GC were 10.31±5.77 and 10.44± 5.04 years. Base line value of (Mean) FBS, 2HABF, 2HAL, 2HAD and HbA1c in GI were 15.89±4.04, 19.73±4.18, 17.65±3.92, 16.14±3.74 and 11.17±2.56& in GC

were 16.17±2.91, 20.70±3.73, 16.54±3.97, 17.02±3.28 and 12.01±2.33 respectively with no significant difference across the group (p>0.05 in all cases). At the end of 3 months follow up, significant improvement were seen in FBS, 2HABF, 2HAL, 2HAD and HbA1c in interventional group than control group (p<0.05 in all cases). Besides this, in intervention group the baseline diabetes self-management evaluation score was improved than control group (1.40±0.94 vs. 7.74±1.52, p<0.001).

Conclusions: There is a significant positive impact of structured diabetes education on achieving glycemic control in patient with uncontrolled diabetes mellitus.

Abstract Number: BES_ABS_19

Title: RISK ASSESSMENT OF K+ CHANNEL KIR6.2 (BIR) GENE IN TYPE 2 DIABETES IN BANGLADESH

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Introduction: Signals derived from the metabolism of glucose in pancreatic β-cells lead to insulin secretion via the closure of ATP-sensitive K+ channels (KATP). The cloning of the gene encoding the β-cell inward rectifier Kir6.2 (Bir), a subunit of the β-cell KATP channel, provided the opportunity to look for mutations in many genes that might contribute to the impaired insulin secretion of T2DM.

Objectives: The aim of our study was to investigate the risk assessment one of Kir6.2 variant KCNJ11with T2DM by single-strand conformational polymorphism (SSCP) analysis in population of Bangladesh.

Methods: In a case-control study with 697 unrelated subjects, 326 healthy controls and 371 diabetic patients (diagnosed based on American Diabetes Association criteria) were recruited. The fasting serum glucose, HbA1C and serum Insulin level were estimated by GOD-PAP, HPLC and ELISA method respectively. HOMA B%, HOMA S% and HOMA IR were calculated by HOMA-SIGMA software version 2.2.Chemical method was used for DNA extraction from whole blood sample. Polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) method was used to detect KCNJ11 gene polymorphism with BanII, restriction enzyme digestion respectively. Data were analyzed using independent t-test, Chi-square or Fisher exact test, as appropriate. p<0.05 was considered significant.

Results: Baseline data showed that FBG and HbA1c% level of diabetic group were significantly higher than control group (p <0.001). HOMAB% (p<0.001); HOMA S% (p<0.001), QUICKY (p<0.001) and secretory HOMA (p<0.005) were significantly lower while insulin resistance (HOMA IR) was significantly higher (p<0.001) in diabetic subjects compared to control respectively. In diabetic subjects, the frequency of homozygous wild (E23E), homozygous mutant variants (K23K) and heterozygous mutant variants (E23K) was found 53.37%, 14% & 42.86% and in control subjects70.25%, 6.00% and 27.91% respectively. The single-strand conformational polymorphism (SSCP) analysis showed that a significant association exist among E23K[(p <0.0001, OR (95% CI): 2.02 (1.47-2.78)], K23K [p<0.05, OR (95% CI): 2.70 (1.02-7.16)]and total polymorphic variantsE23K+K23K[p<0.0001, OR (95% CI): 2.06 (1.51-2.82)]genotypes ofKCNJ11 gene with T2DM where the E23E genotype was considered as reference group respectively. However, E allele frequencies of diabetic and control subjects were 0.748 and 0.842; whereas K allele frequencies were 0.252 and 0.158, which showed that K allele of cases were significantly higher than E allele (p<0.005)respectively. No association was found between genotypic variants with glycemic and insulinemic parameters respectively.

Conclusions: From the obtained results it may be concluded that the heterozygous and homozygous mutant of

KCNJ11 gene at E23K position has 2.02 and 2.70 fold increased risk for T2DM in the population of Bangladesh.
Abstract Number : BES_ABS_20

Title: PATTERN OF ELECTROLYTES INCLUDING CALCIUM AND MAGNESIUM IMBALANCE WITH ETIOLOGY ASSESSMENT IN PATIENTS ADMITTED IN ENDOCRINE DEPARTMENT OF A TERTIARY CARE HOSPITAL

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Introduction: Several endocrine disorders have marked effects on fluid, electrolyte, and acid-base homeostasis including diabetic ketoacidosis, hyperglycemic hyperosmolar state, and acute adrenal crisis etc. An understanding of the etiology behind the development of these electrolytes along with calcium and magnesium imbalance helps to guide therapy and improves the clinical outcome.

Objectives: The aim of this study to see the pattern of electrolytes, calcium and magnesium imbalance with etiology assessment in patients admitted in endocrine department of a tertiary care hospital.
Methods: This cross sectional observational study was carried out from January 2018 to December 2018, at in-patient department of Endocrinology, BIRDEM General Hospital, Dhaka. Diagnosed (old and new) cases of diabetic and other endocrine disorders having electrolytes, calcium and magnesium imbalance were approached for inclusion of the study. Sampling technique was purposively selected focusing on demographic profile and diagnosis of the disease.

Results: Among the 100 participants, mean age of the study population was 46.26±16.97 years, ranging from 14 to 75 years. There were 50%-male and 50%-female. In result the most common electrolyte imbalance was hyponatremia (36%) that was more in type-2 DM patients (n=25) then in Addison's disease(n=4) and rest are in other specific form of DM(n=3),type-1 DM(n=2), DM with hypoparathyroidism(n=1) and hypoparathyroidism(n=1) which may be due to SIADH. Followed by hypokalemia (14%) which mostly encountered in type-2 DM patient (n=6) due to diuretics and in Conn's syndrome (n=4), hyperkalemia (10%) which mostly observed in type-1 DM patient (n=4) due to DKA, and hypercalcemia (8%) was found in non-diabetic endocrine disorders. Hypernatremia, hypocalcemia and hypomagnesemia were present in 7%, in 6%, and 6% cases, respectively. The most common precipitating cause of these electrolyte imbalances was vomiting (30%) due to different causes like urinary tract infection; acute gastritis and pancreatitis. Diuretic (Loop & Thiazide) therapy (10%) and HHS (8%) were the second and third most common cause behind these electrolytes imbalance.
Conclusions: In conclusion data obtained in this study showed hyponatremia was the most common findings which more observed in diabetic patients. As vomiting is the most common cause behind this so any diabetic patients either present with vomiting or any other illness should routinely advice electrolytes along with magnesium as hypomagnesemia also more observed in this group. To find out the cause of hypokalemia in non-diabetic patients should evaluate the Conn's syndrome and don't forget to measure the parathyroid hormone in hypercalcemic patient. Further study is needed to find out the causes of vomiting.

Abstract Number: BES_ABS_21

Title: AUTOIMMUNE POLYGLANDULAR SYNDROME (TYPE - LLL) : CASE REPORT

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Introduction: Autoimmune polyglandular syndromes are constellations of multiple glandular insufficiencies. There

are four types - l, ll, lll and lV. Type ll is the commonest. Type lll does not involve the adrenal cortex but two of the followings: autoimmune thyroid disease, type 1 diabetes mellitus (DM), rheumatoid arthritis, autoimmune liver disease, pernicious anemia, vitiligo and alopecia. This case belongs to type lll because of the presence of type 1 diabetes, hypothyroidism, rheumatoid arthritis and vitiligo along with a probable association of autoimmune hepatic involvement and is reported because of its rarity.

Case Description: A 14-year-old girl was admitted with the complaints of upper abdominal pain, vomiting and increase in respiratory rate of one day duration. She was a known case of type 1 DM with insulin resistance, deforming rheumatoid arthritis and hypothyroidism with raised hepatic transaminases-possibly due to autoimmune liver disease. She was previously admitted one month ago for diabetic ketoacidosis (DKA) when her liver function tests were deranged in the form of raised transaminases with normal bilirubin level. Her viral markers were non-contributory. On clinical examination, conscious, oriented, afebrile, severely dehydrated, having Kussmaul's breathing. She had vitiligo on extensor surface of both elbows and around the neck. Investigations showed blood gas analysis revealed severe high anion gap metabolic acidosis. Urine for acetone was positive. Her thyroid microsomal antibodies were positive. Her serum calcium, magnesium, phosphate, parathormone, cortisol, luteinizing and follicular stimulating hormone were all within normal range. She was treated with standard protocol for DKA.

Abstract Number: BES_ABS_22

Title: IMPACT OF HEALTH EDUCATION ON QUALITY OF LIFE IN PERSONS WITH DIABETES ATTENDING ENDOCRINOLOGY DEPARTMENT OF A TERTIARY CARE HOSPITAL

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Affiliation(s):

Introduction: Since diabetes is a progressive disease, the health status of the affected individual tends to deteriorate over time, when complications begin to appear arising from poor glycemic control. This situation can lead to a depreciation in the quality of life (QoL), as it is reflected in different aspects, such as a weakened physical state, impaired physical functioning, lower limb pain, lack of vitality, difficulty in social relationships, and emotional instability.

Objectives: To assess the effect of health education on quality of life in diabetic patients attending department of Endocrinology, BIRDEM General Hospital.

Methods: It was a prospective interventional study including both type 1 and type 2 diabetic patients from age range 18-70 years. In total, 50 individuals were randomly selected from inpatient department of Endocrinology based on date of admission. Information on demographic and clinical characteristics were collected together with information on preexisting medical conditions. The health related quality of life was measured with a self administered short form questionnaire of Medical Outcomes study (SF-36 V2).To ensure the clarity of questionnaires in Bangla, pilot testing of the questionnaire was also performed using the coherence and consistency upon 20 non diabetic persons who were not included in the survey. The education as intervention factor was performed using face-to-face and group teaching methods to participants. One hour sessions by investigator, 30min session by a health educator and one hour group session was provided as intervention. Thirteen patients were lost at follow up. Thirty seven patients were successfully followed up three months after intervention.

Results: Intervention caused significant improvement in the score of QoL in general wellbeing, physical, mental and social component among participants (p value 0.04-0.001). Only health perception component of QoL did not show any significant improvement (p value 0.77).

Conclusions: This study provides evidence that health education significantly improves quality of life in diabetic patients.

Abstract Number: BES_ABS_23

Title: LINGUAL THYROID : A CASE REPORT

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Affiliation(s):

Introduction:

The thyroid gland is one of the largest endocrine glands in the body, itlies approximately the same level as the cricoid cartilage. Ectopic thyroid tissue has been found from the tongue to the diaphragm. Ninety percent of the reported cases of ectopic thyroid are found in the base of the tongue. Lingual thyroid is a rare developmental thyroid anomaly, caused by the failure of the gland to descend from its anlage, early in the course of embryogenesis. It generally originates from epithelial tissue of non-obliterated thyroglossal duct. Prevalence rates of LT vary from 1 in 100,000 to 1 in 300,000, with females to male ratio ranging from 4:1 to 7:1.12. Although the pathogenesis of lingual thyroid is unclear, some authors have postulated that maternal antithyroid immunoglobulins may impair gland descent during early fetal life. Clinical presentation is varying from no symptoms to mild dysphagia to severe upper airway obstruction. Diagnosis depends on finding thyroid tissue at the base of the tongue with the absence of normally located gland. Imaging studies as ultrasound scan, C.T scan and Technetium (Tc99m) thyroid scan would be of great value establishing the diagnosis. The treatment options for lingual thyroid include: levothyroxine suppression therapy, radioactive iodine ablation and lingual thyroidectomy. The decision between conservative and surgical therapy depends on subjective complaints, regional iodine uptake, growth behavior of the lingual thyroid and especially on cytological findings of fine needle biopsy.

Case Description: We present a case of a 18-year-old boy who was referred to the outpatient clinic of Endocrinology from ENT, complaining of tongue mass, easy fatigue and constipation. He first noticed this mass 6yrs back. Size of the mass is gradually increasingfor last 2yrs since his puberty. He has no dyspnoea or dysphagia. Her past medical history was insignificant. Her mother denied receiving any medications during pregnancy. On physical examination, it was noticed that she had a3 cm×2 cm midline smooth, rubbery and reddish mass at the base of the tongue, with overlying telangiectasias. Neck examination revealed neither palpable thyroid gland nor any other palpable masses. Thyroid function tests demonstrated primary hypothyroidism. Other laboratory tests were within normal limits. Thyroid US scan revealed the absence of thyroid gland at thyroid bed. Technetium (Tc99m) thyroid scan, revealed isotope uptake at the base of the tongue and no uptake in the normal thyroid location. Fine needle aspiration biopsy was not done due to possible haemorrhage. The nominated final diagnosis was lingual thyroid. Replacement treatment with thyroid hormone was initiated at 100ugm/D. After 3 weeks at follow up he was found to be symptom free with a reduction in mass size and normalization of thyroid function test. No surgical method was implemented since he had no pressure symptoms.

Conclusions: When a mass lesion is observed in the tongue base, ectopic lingual thyroid must be taken into consideration in the differential diagnosis, and the diagnosis must be verified using ultrasonography, scintigraphy. Therapeutic approach should be considered according to symptoms present. The risks and benefits of each treatment modality should always be discussed with the patient.

Abstract Number: BES_ABS_24

Title: THE OPTIMAL LEVEL OF SERUM VITAMIN D IN APPARENTLY HEALTHY ADULT VOLUNTEER
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Background: Vitamin D deficiency is highly prevalent in several parts of the world including in our population. Vitamin D level has profound clinical implications but there is dilemma of normal vitamin D cut- off level among Bangladeshi population as well in many parts of the world. So this study is aimed to determine the normal level of vitamin D in healthy Bangladeshi adults.

Objectives: To determine the optimal level of vitamin D in relation to intact PTH and serum calcium in apparently healthy adult volunteer.

Methods: This observational cross-sectional analytical study was carried out in 130 (age: 37.57±12.22 years) apparently healthy adult participants of BSMMU. Serum 25(OH) D [high performance liquid chromatography (HPLC) method], intact parathyroid hormone, corrected serum calcium and serum phosphate were measured.

Results: The mean 25(OH) D level of the study population was 16.78±8.47 ng/ml and significantly different by age distribution and adequacy sun exposure. A significant negative correlation was found between serum intact parathyroid hormone and serum 25(OH) D (r = - 0.22, P = 0.01). Serum 25(OH) D levels less than 27.5ng/ml were associated with a steep increase in serum intact parathyroid hormone levels. The quadratic fit with plateau model showed that intact parathyroid hormone stabilizes at 25(OH) D level of 54.5 pg/ml.

Conclusions: From this study the optimal level of 25(OH)D for apparently healthy adult in Bangladesh is 27.5 ng/ml.

Abstract Number: BES_ABS_25

Title:ASSOCIATION OF INSULIN RESISTANCE WITH OVARIAN MORPHOLOGY IN WOMEN WITH PCOS: A CROSS SECTIONAL STUDY

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Introduction: Polycystic ovary syndrome (PCOS) is a very common disorder associated with insulin resistance and metabolic disease. Insulin resistance is likely involved in the promotion of the PCOS reproductive phenotype and may mediate some of the ovarian morphology as insulin cause mitogenic stimulation of ovarian theca cells.

Objectives: To evaluate the association between ovarian morphology and insulin resistance in women with polycystic ovary syndrome.

Methods: This cross-sectional study encompassed one hundred PCOS patients according to Rotterdam criteria carried out in the department of Endocrinology at BSMMU. Ovarian morphology was assessed by trans-vaginal or trans-abdominal ultrasound and insulin resistance was measured by fasting insulin and HOMA-IR. Metabolic parameters (fasting insulin, HOMA-IR, fasting glucose, 2 h glucose, waist circumference, acanthosis nigrican) were compared with the ovarian volume and ovarian follicle number separately in the newly detected PCOS women. Data were calculated by SPSS program, version 22.

Results: In our study, 82% subjects had insulin resistance (fasting insulin>12 IU/ml, HOMA-IR> 2.6) whereas 76% subjects had increased ovarian volume (>10 cc) and 70% had increased follicle number ($\geq$12) in either or both ovaries. Insulin resistance was not significantly associated with ovarian volume or follicle number.

Conclusions: In this study, we did not find any association of insulin resistance with ovarian volume or follicle number. Hereby, ovarian volume and follicle number are not predictive of insulin resistance in women with PCOS.

Abstract Number: BES_ABS_26

Title: THE RELATIONSHIP BETWEEN VITAMIN D AND INSULIN RESISTANCE AMONG ADULTS WITH PREDIABETES

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Background: Both vitamin D deficiency (VDD) and insulin resistance (IR) are prevalent in adults with prediabetes (PD). Recent studies suggest that vitamin D plays an important role in insulin sensitivity. But their (vitamin D vs. IR) relationship in PD is controversial and needs to be explored in our population.

Objectives: To determine the relationship among serum vitamin D, serum intact parathyroid hormone (iPTH) and IR among adults with PD.

Methods: After getting ethical clearance from the institutional review board of BSMMU, 115 newly diagnosed and untreated patients with prediabetes and 75 age group- and sex-matched healthy controls after excluding conditions or drugs affecting vitamin D level were included by consecutive non purposive sampling. Sociodemographic & vitamin D-related histories were taken, physical examinations were performed. Venous blood was collected in the fasting state to measure 25(OH) vitamin D and iPTH in all participants and fasting insulin in the prediabetic adults. Statistical analysis was done by SPSS version 22.0.

Results: The frequency of vitamin D deficiency was more in the control group than the prediabetic group (54.7% vs 46.1%) which did not differ significantly. There were no significant association between vitamin D status and iPTH status or their interaction with HOMA-IR in the prediabetic population. No significant correlation were found between vitamin D level ($r= -0.07$, $p= 0.44$) and iPTH level ($r= 0.08$, $p= 0.37$) with HOMA-IR.

Conclusions: Vitamin D deficiency in PD is as prevalent as in general population. There is no relationship between vitamin D and IR among adults with prediabetes.

Controversies in the treatment of women with menopausal hormones

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Abstract

Normal women have menopause at a mean age of 51 years, with 95 percent becoming menopausal between the ages of 45 to 55 years. During the menopause transition and postmenopause, many women experience moderate to severe hot flashes. Systemic estrogen is the most effective treatment available for relief of hot flashes. Postmenopausal women may also experience vulvovaginal symptoms including dyspareunia, which can be effectively treated by local administration of estrogen. The initiation of menopausal hormone therapy (MHT) is a safe option for healthy, symptomatic women who are within 10 years of menopause or younger than age 60 years and who do not have contraindications to MHT (such as a history of breast cancer, coronary heart disease [CHD], a previous venous thromboembolic event or stroke, or active liver disease. Estrogen-progestin therapy should be used for women with a uterus and unopposed estrogen for those posthysterectomy. For women with vaginal atrophy symptoms only, it is suggested to use vaginal estrogen. MHT is effective for the treatment of menopausal hot flashes and vaginal atrophy caused by hypoestrogenism. However, it is not recommended for the prevention of chronic disease such as prevention of cardiovascular or bone disease. In the Women's Health Initiative (WHI) combined hormone therapy (HT) trial, risks included CHD events, stroke, venous thromboembolism (VTE), and breast cancer, while benefits included a reduction of fracture and colorectal cancer risk. Results for stroke, VTE, and fracture risk with unopposed conjugated equine estrogen were similar to those in the combined therapy trial. In contrast, no increase in either CHD or breast cancer risk was seen with unopposed estrogen use; in fact, a possible reduction in breast cancer risk was observed. The discrepancies in CHD and breast cancer risk between the WHI unopposed estrogen trial and the combined estrogen-progestin trial suggest that the progestin played an important role in the increased CHD and breast cancer risk seen with combined therapy. Subsequent analyses suggest that the risk of CHD appears to depend upon the timing of exposure, with no excess risk observed in younger (<60 years of age) menopausal women. In addition, mortality rates appear to be lower in young postmenopausal hormone users compared with nonusers. Thus, for young, symptomatic postmenopausal women, short-term HT is considered to be a reasonable option.

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2nd International Endocrine Conference & 7th Annual General Meeting 2019
01-02 November 2019, Grand Ball Room, Pan Pacific Sonargaon, Dhaka, Bangladesh

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Dr Rakiba Rezwana	Dr Sadia Jabeen Mustafa
Dr Ramen Chandra Basak	Dr Sadia Nusrat Ananya
Dr Rashida Tanjum Hena	Dr Sadiqa Tuqan
Dr Rezaul HKrim Kazal	Dr Sadman Sakib Rahman
Dr Rezaul Karim	Dr Sagir Abdur Rahim
Dr Rezwana Sobhan	Dr Saidur Rahman
Dr Riaz Hossain	Dr Sajal Saha

Dr Salahuddin Kader Chodhury	Dr Shaila Mazed
Dr Samira Hossain Chowdhury	Dr Shakhawat Hossain
Dr Samira Islam	Dr Shammy Irin
Dr Samira Jalil Tanni	Dr Shankar Barua
Dr Samira Mahjabeen	Dr Sharmin Chowdhury
Dr Samira Rahat Afroze	Dr Sharmin Jahan
Dr Samira Yasmeen Ahmed	Dr Sharmin Jahan
Dr Sanjida Binte Munir	Dr Sharmin Kauser
Dr Sanjida Islam	Dr Sharmin Mahmud
Dr Sanjoy Kumar Shil	Dr Sharmin Siddiquie
Dr Sarker M Saiful Islam	Dr Shazia Afrin
Dr Sayeda Mubina Noor	Dr Shedat
Dr Sazzad Hossain	Dr Shirazum Munira
Dr Sazzad Hossain Rajib	Dr Shohan Ahmed
Dr Shafiqul Alam	Dr Shubhrangshu Banerjee
Dr Shafiqul Bashar	Dr Shudhansu Kumar Saha
Dr Shafiqul Islam	Dr Sirazum Munira
Dr Shahana Parveen	Dr Sitesh Goit
Dr Shahin Ibne Rahman	Dr SM Mohiuddin
Dr Shahinur Rahman	Dr SM Raihar Habib
Dr Shahriar Al Mehedi	Dr Sobhan Ali
Dr Shaikh Tania Binte ….	Dr Soumik Ahmed Sourav

Dr Sourav Sarker	Dr Tania Tofail
Dr Subi Kharel	Dr Tanjila Akter
Dr Sultana Rehana Akter	Dr Tanjina Jerin
Dr Sultanul Malik Naznin	Dr Tanmay Biswas
Dr Sumayia Minhaj	Dr Tanvir Ahmed
Dr Sumon Dhar	Dr Tareen Ahmed
Dr Sumzida Afrin	Dr Tarin Binte Zaman
Dr Sunny Isnine Chowdhury	Dr Tawhidul Alam
Dr Sunzida Sultana Nishu	Dr Towhid Hasan Hemel
Dr Suresh Nandi	Dr Umme Azad
Dr Susmita Paul	Dr Umme Sadeqa Mst Kaniz Wahida
Dr Swapon Kumar Sinha	Dr Umme Sadia Mili
Dr Swarna Chakraborty	Dr Umme Salma Munni
Dr Syed Md Miron Hasan	Dr Umme Sumaiya
Dr Syeda Salma Shireen	Dr Uttam Kumar Dey
Dr Taher Uddin	Dr Uzzal Kumar Sikder
Dr Tahmina Amir	Dr Wafa Binte Shafiq
Dr Tahmina Khanom	Dr Wakila Tabassum
Dr Tamanna Jahan	Dr Washim Ahmed Palash
Dr Tania Adhikary	Dr Wharesha Sarker Shama
Dr Tania Afrin	Dr Yasmin Aktar
Dr Tania Sultana	Dr Zakera Yasmat

Dr Zarin Tasnim	Dr. Md. Shakhawat Hossain
Dr. Md. Shah Alam	Dr. Mohammed Rasel Khan
Dr. Md. Shahidul Islam Bhuya	Dr. Abdullah Al Parvez
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Membership Guideline

Category	Qualification	Fee	Validity
Life Member	Endocrinologists bearing degree of MD (EM)/DEM/FCPS (Endocrinology)/ M Phil (Clinical Endocrinology) under recognized university of Bangladesh and recognized by BMDC	10,000	Lifetime
General Member		1,000	2 Calendar Years
Associate Member	Post graduate in any specialties, working in the field of endocrinology. Associate membership will require proof of active participation in the field of endocrinology and or research activity with endocrine disorders. Associate member will not be able to hold office and will not have any voting rights. They can participate in all other activities of the society	600	2 Calendar Years

- Must attach copy of Photo, NID, BMDC Reg. Certificate of all Degree, Diploma, Fellowship, Documents for proof (for associate member)
- Submit the completed application form to BES SECRETARIAT

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86.	LM 086	Dr Azmiri Zaman
87.	LM 087	Dr Mosharrof Hossain
88.	LM 088	Dr Md Zakiur Rahman
89.	LM 089	Dr Nazmul Kabir Qureshi
90.	LM 090	Ms Ummy Salma Munni
91.	LM 091	Dr A H M Aktaruzzaman
92.	LM 092	Dr Md Azizul Hoque
93.	LM 093	Dr Indrajit Prasad
94.	LM 094	Dr Nazma Akter
95.	LM 095	Dr Dulal Chandra Ray
96.	LM 096	Prof Md Hafizur Rahman
97.	LM 097	Dr Abu Nesar Taib
98.	Lm 098	Dr S M Showkat Ali
99.	LM 099	Dr Choudhury Meshkat Ahmed
100.	LM 100	Dr Hurjahan Banu
101.	LM 101	Dr Mohammad Atiqur Rahman
102.	LM 102	Dr. Mashfiqul Hasan
103.	LM 103	Dr Debasish Kumar Ghosh
104.	LM 104	Dr Taaniyah Haq
105.	LM 105	Dr Abul Kalam Mohammad Aminul Islam
106.	LM 106	Dr Nazma Akhtar
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108.	LM 108	Dr A T M Zabed Hasan
109.	LM 109	Dr Rokonuzzaman
110.	LM 110	Dr Mahmudul Huque
111.	LM 111	Dr Mohammad Saifuddin
112.	LM 112	Prof Dr Nizamul karim Khan
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114.	LM 114	Dr Mohammed Mahboob Iftekhar
115.	LM 115	Dr Ahmed Salam Mir
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142.	LM-142	Dr Yasmin Aktar

143.	LM-143	Dr Mostafa Hasan Rajib
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148.	LM-148	Dr Faria Quadir
149.	LM-149	Dr Md Al Sadi
150.	LM-150	Dr Salim Reza
151.	LM-151	Prof Abdul Mannan Sarker

General Member (2018-2020)

SL	Membership Number	Name	Validity
1.	GM-001	Dr Moinul Islam	2018-19
2.	GM-002	Dr Md Atikur Rahman	2018-19
3.	GM-003	Dr Muhammad FakrulAlam	2018-19
4.	GM-005	Dr A H M Shadequl Islam	2018-19
5.	GM-006	Dr Shahana Parveen	2018-19
6.	GM-007	Dr NaushalAzimul Haque	2018-19
7.	GM-008	Dr Bimol Kumar Agarwala	2018-19
8.	GM-009	Dr Mohammad Jahangir Alam	2018-19
9.	GM-010	Dr Mobarak Hosen	2018-19
10.	GM-011	Dr Prashanta Prasun Dey	2018-19
11.	GM-012	Dr Md Abdul Kader	2018-19
12.	GM-013	Dr Md Kamrul Azad	2018-19
13.	GM-014	Dr Mohammad Imtiaj Mahbub	2018-19
14.	GM-015	Dr K M Nahid-Ul-Haque	2018-19
15.	GM-016	Dr Motiur Rahman	2018-19
16.	GM-017	Dr Sharmin Chowdhury	2018-19
17.	GM-018	Dr Mohammad Motiur Rahman	2018-19

18.	GM-019	Dr Mohammed Abu Bakar	2018-19
19.	GM-020	Dr Muhammad Abdul Halim Khan	2018-19
20.	GM-021	Dr Abu Noyim Mohammad	2018-19
21.	GM-022	Dr Md ForhadAlam	2018-19
22.	GM-023	Dr ShomaSharker	2018-19
23.	GM-024	Dr Sheik Shirin Afroz	2018-19
24.	GM-025	Dr Jannatun Naima Khanam	2018-19
25.	GM-026	Dr Lala Shourav Das	2018-19
26.	GM-027	Dr Md Palash Mollah	2018-19
27.	GM-028	Dr Dahlia Sultana	2018-19
28.	GM-029	Dr Alamgir Hossan	2018-19
29.	GM-030	Dr Mohammad Rashedul Hasan	2018-19
30.	GM-031	Dr Sayed Shahidul Islam	2018-19
31.	GM-032	Dr Palash Kumar Chanda	2018-19
32.	GM-033	Dr Md Lutful Kabir	2018-19
33.	GM-034	Dr Afroza Begum	2018-19
34.	GM-035	Dr Sunjida Islam	2018-19
35.	GM-036	Dr Begum Moriom Zamila	2018-19
36.	GM-037	Dr Muhammad Mahabubur Rahaman	2018-19
37.	GM-038	Dr Muhammad Abdul Hannan	2018-19
38.	GM-039	Dr Ashim Dhar	2018-19
39.	GM-041	Dr Shangkar Barua	2018-19
40.	GM-042	Dr Nusrat Zarin	2018-19
41.	GM-045	Dr Md Rakibul Hasan	2018-19
42.	GM-046	Dr Md Ahamedul Kabir	2018-19
43.	GM-047	Dr (Col) Mohammad Sarwar Khan	2018-19
44.	GM-048	Dr Khadiza Umma Salma	2018-19
45.	GM-049	Dr Md Anwarul Kabir	2018-19
46.	GM-050	Dr Ramen Chandra Basak	2018-19

47.	GM-051	Dr Md Masud Nabi	2019-20
48.	GM-052	Dr Khorshed Anowar	2019-20
49.	GM-053	Dr Shafiqul Bashar	2019-20
50.	GM-054	Dr Omar Faruque	2019-20
51.	GM-055	Dr Mohammad Nurul Amin	2019-20

Associate Member (2018-2019)

SL	Membership Number	Name	Validity
1.	AM-001	Dr Afrah Khan	2018-2019
2.	AM-002	Dr Sharmin Kauser	2018-2019
3.	AM-003	Dr Kazi Nazmul Hossain	2018-2019
4.	AM-004	Dr Israt Rezwana	2018-2019
5.	AM-005	Dr Mita Dutta	2018-2019
6.	AM-006	Dr Mohammad Aminul Islam	2018-2019
7.	AM-007	Dr Azimun Nessa	2018-2019
8.	AM-008	Dr Mostofa Kamal Chowdhury	2018-2019
9.	AM-009	Dr Anaya Saha Banna	2018-2019
10.	AM-010	Dr Shahinoor Siddiqui Runa	2018-2019
11.	AM-011	Dr Mahmud Hasan	2018-2019
12.	AM-012	Dr Samira Mahjabeen Mithila	2018-2019
13.	AM-013	Dr Md Shahed Morshed	2018-2019
14.	AM-014	Dr Md Abu Shehab	2018-2019
15.	AM-015	Dr Mohona Zaman	2018-2019
16.	AM-016	Dr Md Imrul Hasan	2018-2019
17.	AM-017	Dr Kashfia Ahmed Keya	2018-2019
18.	AM-018	Dr Tahseen Mahmood	2018-2019
19.	AM-019	Dr Shazia Afrine Eva	2018-2019
20.	AM-020	Dr Ahmed Hossain	2018-2019
21.	AM-021	Dr Hasan Ali Choudhury	2018-2019

Bangladesh Endocrine Society

2nd International Endocrine Conference & 7th Annual General Meeting 2019

01-02 November 2019

Grand Ball Room, Pan Pacific Sonargaon, Dhaka, Bangladesh

Program: Scientific Session
Day 1: November 1, 2019, Friday

Time	Speaker	Title	Session Chair
8.00 AM – 8.20 AM	Dr Md Faruque Pathan (BAN)	OAD-Targeted Approach	Dr Zafar Ahmed Latif Dr Rakesh Sahay
8.20 AM – 8.40 AM	Dr Sujoy Gosh (IND)	Glitazones - Back from the Ashes)	
8.40 AM – 9.00 AM	Dr S V Madhu (IND)	Triglyceride Dysmetabolism as the Central Defect in Type 2 Diabetes	
9.00 AM – 9.20 AM	Dr Charles Antonypillai (SL)	Diabetes Therapeutics and Cardiovascular Outcomes	
9.20 AM – 9.30 AM	Q&A		
9.30 AM – 10.00 AM	**Inaugural Ceremony** Chairperson: Dr Md Faruque Pathan Chief Guest: Dr Andre Lacroix Honorary Presidents: Dr A K Azad Khan Dr Hajera Mahtab Special Guests: Dr Zafar Ahmed Latif Dr S M Ashrafuzzaman Dr Dina Shreshtha		
Session 2: Ibrahim Memorial Oration (10.00 am - 10.30 am) **Chairperson: Dr Md Faruque Pathan**			

10.00 AM - 10.30 AM	Dr Andre Lacroix (CAN)	Primary Aldosteronism-Update on Diagnosis and Therapy	
Session 3: ISE Symposium (10.30 am - 12.50 pm)			Dr Md Hafizur Rahman Dr. Md. Mahmudul Haque
10.30AM-11.00 AM	Dr Sabine Elisabeth Hannema (NLD)	DSD: When to Intervene	
11.00 AM - 11.30 AM	Dr Duncan Topliss (AUS)	Pearls of Diagnosis of Autoimmune Thyroid Disease	
11.30 AM – 12.00 PM	Dr Chionh Siok Bee (SIN)	Osteoporosis: Controversies and Emerging Concepts	
12.00 PM - 12.30 PM	Dr Andre Lacroix (CAN)	Controversies in Cushing Syndrome Diagnosis	
12.30 PM - 12.50 PM	Q&A		
LUNCH and Prayer: 12.50 pm - 2.30 pm			
Session 4: SAFES Symposium (2.30 pm - 3.45 pm)			
2.30 PM - 2.50 PM	Dr Manilka Sumanatilake (SL)	Adrenal Incidentaloma: Current and Emerging Aspects	
2.50 PM – 3.10 PM	Dr Dina Shrestha (NEP)	Gestational Diabetes: Best Practices for Screening, Diagnosis and Treatment	
3.10 PM – 3.30 PM	Dr Sarita Bajaj (IND)	Subclinical Thyroid Disease-Whom, When and Why to Treat	
3.30 PM – 3.45 PM	Q&A		
Session 5: AACE Symposium (3.45 pm - 5.00 pm)			
3.45 PM – 4.15 PM	Dr Nihal Thomas (IND)	Approach to Young onset Diabetes	Dr S M Ashrafuzzaman Dr Tanjina Hossain
4.15 PM – 4.45 PM	Dr Sanjay Kalra (IND)	Dementia, Depression and Diabetes	
4.45 PM – 5.00 PM	Q&A		

Session 6: Insulin Symposium (5.00 pm - 6.15 pm)			Dr Md Faruque Pathan Dr Kazi Ali Hassan
5.00 PM – 5.20 PM	Dr Shahjada Selim (BAN)	Obstacles and Motivation of Insulin Initiation	
5.20 PM – 5.40 PM	Dr Faria Afsana (BAN)	Insulin Initiation: Individualized Approach	
5.40 PM – 6.00 PM	Dr M Saifuddin (BAN)	Glimpses of Modern Insulin with Technology	
6.00 PM – 6.15 PM	Q&A		
6.15 PM – 6.45 PM Hall A	Solving Challenging Endocrine Cases		Dr Md Hafizur Rahman Dr. Ahmed Salam Mir
6.15 PM – 6.45 PM Hall B	Insulin Pump Workshop (Pre-registration)		Dr Md Faruque Pathan
Day 2: November 2,2019, Saturday			
8.00 AM - 9.00 AM Hall A	Free Paper Session		Dr M A Sayeed Dr Ahsanul Haque Amin Dr Md Shahjamal Khan
8.00 AM - 9.00 AM Hall B	Free Paper Session		Dr Tofail Ahmed Dr Md Feroz Amin Dr Ahmed Salam Mir
Session 7: Diabetes Symposium (9.00 am - 10.15 am)			
9.00 AM – 9.20 AM	Dr Manilka Sumanatilake (SL)	Diabetes Prevention in SEA region: Ways and Action Plan	Dr Laique Ahmed Khan Dr Sambit Das
9.20 AM – 9.40 AM	Dr Chowdhury Meshkat Ahmed (BAN)	Diabetes and Heart failure: Best approach	
9.40 AM – 10.00 AM	Dr Nazrul Islam (BAN)	Rheumatological Aspects in Diabetes	
10.00 AM – 10.15 AM	Q&A		

Session 8: Thyroid and Parathyroid Symposium (10.15 am - 11.30 am)			
10.15 AM – 10.35 AM	Dr Md Hafizur Rahman (BAN)	Hypoparathyroidism –Comprehensive Management Plan	Dr Faridul Alam Dr AHM Aktaruzzaman
10.35 AM – 10.55 AM	Dr Mohitul Alam (BAN)	Thyroid Imaging	
10.55 AM – 11.25 AM	Dr Duncan Topliss (AUS)	Updated Management of Differentiated Thyroid Carcinoma	
11.25 AM – 11.30 AM		Q&A	
Session 9: Adrenal Symposium (11.30 am - 12.45 pm)			
11.30 AM – 11.50AM	Prof Andre Lacroix (CAN)	Nobel Therapies of Cushing Syndrome	Dr Mir Mosharraf Hossain Dr Arpan Bhattacharjee
11.50 AM – 12.10 PM	Dr Md Feroz Amin (BAN)	Pheochromocytoma	
12.10 PM – 12.30 PM	Prof Andre Lacroix (CAN)	Management of Adrenal Insufficiency: Current and Emerging Aspects	
12.30 PM – 12.45 PM		Q&A	
Session 10: Pituitary Symposium (12.45 pm - 2.00 pm)			
12.45 PM – 1.05 PM	Dr Salauddin Al Azad (BAN)	Pituitary Imaging	Dr Md Fariduddin Dr Samir Kumar Talukder
1.05 PM – 1.25 PM	Dr Sultana Marufa Shefin (BAN)	Dynamic Endocrine Tests to Assess Pituitary Function	
1.25 PM – 1.45 PM	Dr Hari Kumar (IND)	Hypopituitarism: A Comprehensive Update	
1.45 PM – 2.00 PM	Q&A		

LUNCH & Poster Presentation: 2.00 pm - 3.00 pm			
Session 11: Bone and Metabolism Symposium (3.00 pm - 4.15 pm)			
3.00 PM – 3.20 PM	Dr Md. Nazrul Islam (BAN)	Bone Metabolism in CKD	Dr M A Samad Dr Azizul Haque
3.20 PM – 3.40 PM	Dr Ahsanul Haque Amin (BAN)	Vitamin D: Whether We are in Right Track	
3.40 PM – 4.00 PM	Dr Nazmul Kabir Qureshi (BAN)	Update of Hyperparathyroidism Management	
4.00 PM – 4.15 PM	Q&A		
Session 12: Reproductive Symposium (4.15 pm - 5.30 pm)			
4.15 PM – 4.35 PM	Dr Indrajit Prasad (BAN)	Controversies in the Treatment of Women with HRT	Dr M A Mannan Dr. A. Mannan Sarker
4.35 PM – 4.55 PM	Dr M A Hasanat (BAN)	PCOS: Present and Future	
4.55 PM – 5.15 PM	Dr Rashida Begum (BAN)	Update of ART	
5.15 PM – 5.30 PM	Q&A		
6.00 PM	Annual General Meeting 2019	Moderator: Dr Nazma Akhter	

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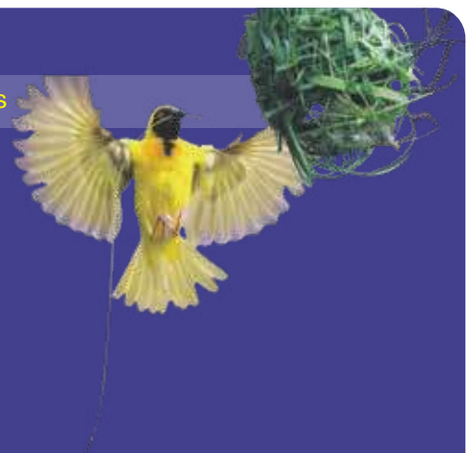

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- Approved in patient with T2DM and high CV risk to reduce the risk of CV death or hospitalization for heart failure[3]
- ADA Level A evidence[4]
- Empagliflozin is recommended preferentially for CV protection by 54 standard guidelines across the globe[5]

References: 1. Data on file, Boehringer Ingelheim. 2. Zinman B, *et al. N Engl J Med.* 2015. 26;373(22):2117-28. 3. DGDA. Jardiance™ prescribing information. Boehringer Ingelheim. Version : 26 June 2018 4. American Diabetes Association. *Diabetes Care.* 2018 Jan;41(Suppl 1): S1-S153. 5. Data on file. Boehringer Ingelheim Pharmaceuticals, Inc

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JARDIANCE™ (empagliflozin) film-coated tablets 10 mg/25 mg

COMPOSITION: 1 film-coated tablet contains empagliflozin 10 mg or 25 mg. INDICATIONS: Glycaemic control: JARDIANCE™ is indicated as an adjunct to diet and exercise to improve glycaemic control in adults with type 2 diabetes mellitus. Prevention of cardiovascular events: JARDIANCE™ is indicated in patients with type 2 diabetes mellitus and high cardiovascular risk to reduce the risk of: (a) All-cause mortality by reducing cardiovascular death, and (b) Cardiovascular death or hospitalization for heart failure. DOSAGE AND ADMINISTRATION: The recommended starting dose of JARDIANCE™ is 10 mg once daily. In patients tolerating empagliflozin 10 mg once daily and requiring additional glycaemic control, the dose can be increased to 25 mg once daily. JARDIANCE™ can be taken with or without food. RENAL INSUFFICIENCY: JARDIANCE™ is not recommended for use in patients with eGFR <30 ml/min/1.73m^2. No dose adjustment is required for patients with eGFR≥30 ml/min/1.73 m^2. CONTRAINDICATIONS: Hypersensitivity to empagliflozin or any of the excipients. In case of rare hereditary conditions that may be incompatible with an excipient of the product, the use of the product is contraindicated. Pregnancy, Lactation, Childhood, Old-age, Hepatic impairment: There are limited data from the use of JARDIANCE™ in pregnant women. As a precautionary measure it is recommended to avoid the use of JARDIANCE™ during pregnancy unless clearly needed. It is recommended to discontinue breast feeding during treatment with JARDIANCE™. Safety and effectiveness of JARDIANCE™ in children under 18 years of age have not been established. No dosage adjustment is recommended based on age. Therapeutic experience in patients aged 85 years and older is limited. Initiation of empagliflozin therapy in this population is not recommended. No dose adjustment is recommended for patients with hepatic impairment. SPECIAL WARNINGS AND PRECAUTIONS: Before initiating JARDIANCE™, assess for volume contraction and correct volume status if indicated. Before initiating JARDIANCE™, consider factors in the patient history that may predispose to ketoacidosis including low carbohydrate diet, acute illness, severe dehydration, pancreatic disorders suggesting insulin deficiency (e.g., type 1 diabetes, history of pancreatitis or pancreatic surgery), insulin dose reduction (including insulin pump failure), patients with a history of ketoacidosis and alcohol abuse. In patients treated with JARDIANCE™ consider monitoring for ketoacidosis and temporarily discontinuing JARDIANCE™ in clinical situations known to predispose to ketoacidosis (e.g. prolonged fasting due to acute illness or surgery. Due to the mechanism of action, the efficacy of empagliflozin is dependent on renal function. Therefore, assessment of renal function is recommended prior to JARDIANCE™ initiation and periodically during treatment, i.e., at least yearly. Caution should be exercised in patients for whom an empagliflozin-induced drop in blood pressure could pose a risk, such as patients with known cardiovascular disease, patients on anti-hypertensive therapy with a history of hypotension or patients aged 75 years and older. Therapeutic experience in patients aged 85 years and older is limited. Initiation of JARDIANCE™ therapy in this population is not recommended. Temporary interruption of JARDIANCE™ should be considered in patients with complicated urinary tract infections. Patients with the rare hereditary conditions of galactose intolerance e.g. galactosaemia should not take this medicine. SIDE EFFECTS: The important adverse reactions include: Vaginal moniliasis, vulvovaginitis, balanitis and other genital infections;Urinary tract infection (including pyelonephritis and urosepsis),Hypoglycaemia (when used with sulphonylurea or insulin),Ketoacidosis, Pruritus ,Allergic skin reactions (e.g.rash, urticaria), Angioedema, Volume depletion, Increased urination, Dysuria, decreased Glomerular filtration rate, Increased Blood creatinine ,increased Haematocrit, increased Serum lipids

API dated 20th Aug 2018 (based on approved pack insert version dated 26 Jun 2018). This is abridged prescribing information for Jardiance. It is recommended to refer to the full prescribing information before prescribing.

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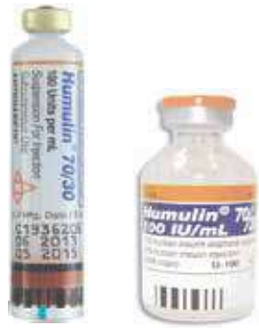

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