



3rd

International Endocrine Conference 2020

Translating evidence to clinical practice

20-21 November 2020 | Virtual Platform

BES Official Website: <https://www.bes-org.net>
BES CON 2020 Website: <https://www.besendocon.com>

Scientific Partner



Acknowledgements

Platinum



Gold



Silver



Bronze



Others





International Endocrine Conference 2020

Abstract book



Published on

November 2020, Dhaka, Bangladesh

Published by

Publication sub-committee (BES)
3rd International Endocrine Conference 2020

Design


Jhumur ad Design

Cell: 01961044767





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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 3rd International Endocrine Conference on 20th and 21st November 2020.

Endocrinology has established itself as a superspecialized subject in the field of medicine over the last few decades in this country. Bangladesh Endocrine Society has been working for the advancement of Endocrinology for the last two decades. 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
Honorary President, BES
Bangladesh Diabetic Somity



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 3rd International Endocrine Conference to be held on 20th and 21st November 2020. Bangladesh Endocrine Society has proved itself as the leading platform for the endocrinologists in Bangladesh for their academic and professional advancement by encouraging clinical activities and research. As a part of this, BES regularly arranges international programs so that the endocrinologists can enrich their knowledge by exchanging views with the distinguished endocrinologists across the globe. In the face of the ongoing COVID-19 pandemic, BES is going to arrange the conference on virtual platform. The upcoming conference will be highly valued by scientific sessions conducted by renowned experts from home and abroad. We hope that the conference will enlighten all the participants and play role in further improvement of our clinical practice.

I wish the conference 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 pleasure and honor to welcome you all to the 3rd International Endocrine Conference of Bangladesh Endocrine Society, to be held on 20th and 21st November 2020. Due to COVID-19 pandemic, we have planned to organize this program in a virtual platform. Bangladesh Endocrine Society has been working for the last 27 years for the advancement of Endocrinology in Bangladesh. For the last few years we have enhanced our activities. Last year we have successfully arranged our 2nd International Endocrine Conference. This year COVID-19 pandemic has hampered many of our regular and proposed activities. But we tried to come forward even with this new odd situation. We have done many scientific programs and meetings using virtual platform. We have formulated 'BES Practical Recommendations for Management of Diabetes and other Endocrine Diseases in Patients with COVID-19' and disseminated by virtual programs. The upcoming 3rd International Endocrine Conference, we hope, will be far more interesting as well as enlightening for the endocrinologists in a new flavor of virtual platform. This conference will be conducted and guided by renowned national and international faculties. The virtual experience will be an opportunity to meet, interact and share the views of latest advance in the field of endocrinology. I am delighted to inform you that International Society of Endocrinology (ISE) and South Asian Federation of Endocrine Societies (SAFES) will be our scientific partners in the program.

I believe that all of you will enjoy the program.

I express my gratitude to the organizers, faculties 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

3rd BES International Conference Organizing and Subcommittees (BESCON 2020)

1) Organizing Committee

- a. Convenor – Prof. M Faruque Pathan
- b. Member Secretary – Prof. Md Hafizur Rahman
- c. Co-ordinator – Dr. Faria Afsana
- d. Joint Coordinator – Dr. Shahjada Selim
- e. Members – All EC Members

2) Registration Subcommittee

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- b. Member Secretary
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Dr. Tanjina Hossain, Dr. Nazmul Kabir Qureshi, Dr. A B M Kamrul Hasan

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- b. **Scientific events**
 - i. Co-ordinator – Dr. Nazmul Kabir Qureshi
- c. **Audio-visual**
 - i. Co-ordinator – Dr. Tanjina Hossain
- d. **Posters**
 - i. Co-ordinator – Dr. A B M Kamrul Hasan
- e. **Media**
 - i. Co-ordinator – Dr. Shahjada Selim
 - ii. Members – Dr. Tanjina Hossain, Dr. M Saifuddin

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Prof. Hajera Mahtab
Prof. A K Azad Khan
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Prof. Liaquat Ali
Prof. Md Abu Sayeed
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7) Guideline Dissemination Committee (Respective Guideline subcommittee)

- a. **Convenor** – Dr. Md. Faruque Pathan
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- c. **Members** –
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 - Dr. Faria Afsana
 - Dr. Nazmul Kabir Qureshi
 - Dr. Ahmed Salam Mir
 - Dr. Md. Fariduddin
 - Dr. Md. Hafizur Rahman

8) 2nd BES-Mayo Advanced Course in Endocrinology-2021 Committee

- a. **Convenor** – Prof. Md Faruque Pathan,
- b. **Member secretary** – Prof. Md Hafizur Rahman,
- c. **Co-ordinator** – Dr. Shahjada Selim
- d. **Members** – Prof. S M Ashrafuzzaman, Dr. M A Samad, Dr. Faria Afsana, Dr. Nazmul Kabir Qureshi, Dr. M Saifuddin, Dr. Ahmed Salam Mir

9) Procurement Committee

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- b. **Member Secretary** – Dr. M Saifuddin

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163.	LM-163	Dr Md Shahed Morshed

General Member (2018-2019-2020)

SL	Membership Number	Name
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34.	GM-048	Dr Khadiza Umma Salma
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43.	AM-044	Dr Rasheda Begum

Title: Pearls of management of Primary Hyperaldosteronism

André Lacroix¹

¹MD, FCAHS, Professor, Division of Endocrinology, Department of Medicine, Centre de Recherche du Centre hospitalier de l'Université de Montréal (CHUM), Montréal, Québec, Canada

Primary aldosteronism (PA) is responsible for 6-13% of human hypertension and increases cardiovascular and other morbidities rates compared to essential hypertension. It is however possible that its prevalence may be even higher when considering less severe forms previously identified as low renin essential hypertension. In addition to the common indications for screening (resistant hypertension, hypokalemia, adrenal incidentaloma, familial cases), recent guidelines recommend to screen all patients with new sustained hypertension (150/100 mmHg) and those with sleep apnea or atrial fibrillation and hypertension. The most frequent causes of PA include bilateral idiopathic hyperplasia (IHA, 60-70%) and unilateral aldosteronoma (APA, 30-40%). This distinction was recently challenged by the findings of zona glomerulosa nodular hyperplasia adjacent to APA identified by immunohistochemistry for aldosterone synthase expression in resected adrenals; a considerable overlap between each etiology may exist with asymmetric bilateral hyperplasia. Adrenal venous sampling (AVS) is required to identify which patients have sufficiently lateralised source of aldosterone and should undergo unilateral adrenalectomy. Unilateral adrenalectomy can also be useful in patients with asymmetric bilateral hyperplasia but with dominant nodule on one side or in patients who have cortisol and aldosterone co-secretion. Complete clinical and biochemical cure following unilateral adrenalectomy varies greatly depending on various populations and surgical criteria utilized; however a majority of patients are clinically improved and require less antihypertensive medication. Long term medical therapy with adequate amounts of mineralocorticoid antagonists is indicated for patients with symmetric bilateral hyperplasia; recent studies suggest that it is important with this therapy to normalize renin concentrations to prevent cardiovascular complications associated with primary hyperaldosteronism.

Title: Prevention of renal failure in DM

Iqbal Munir¹

¹MD, Endocrinologist, Moreno Valley, CA, USA

Improved diabetes care has been associated with improved cardiovascular outcomes but renal complications remaining as a significant problem. Analysis of participants in large multinational clinical trials in patients with advanced diabetic nephropathy and proteinuria shows that the risk of end-stage kidney disease was significantly more common than cardiovascular death. Multiple therapies aimed at reducing cardiovascular disease in DM might have sufficiently reduced the rate of macrovascular complications. On the other hand, more patients are progressing to end-stage kidney disease.

A better understanding of renal disease's pathophysiology in diabetes and the development of

newer agents, including GLP-1 agonists and SGL-2 inhibitor, show promising results in slowing renal deterioration and lowering adverse renal outcomes. I will discuss the recent clinical trial data and the emerging roles of these drugs in improving renal outcomes in diabetes.

Title: Postoperative management of pituitary tumors

Prof. Md. Hafizur Rahman¹

¹MBBS, DEM, MD(EM), Former Prof & Head, Dept of Endocrinology, Dhaka Medical College, & General Secretary, Bangladesh Endocrine Society. Email: hafizdrendo@yahoo.com

Pituitary tumors are common and most are treated surgically except prolactinomas. After preoperative evaluation, all patients will receive replacement hormonal therapy for adrenal insufficiency, hypothyroidism or diabetes insipidus (DI) prior to surgery. Initiation of sex steroid and GH replacement therapy is typically deferred until a later point in the postoperative management. For patients with normal preoperative adrenal function, some experts routinely treat empirically with stress dose of GC during and immediately after surgery, but others wait until postoperative evaluation has demonstrated cortisol deficiency to treat. Although transsphenoidal surgery is effective and well tolerated, there are a number of surgical and endocrine complications that need to be monitored and treated. Common endocrine complications are central DI, Syndrome of Inappropriate ADH Secretion (SIADH) and acute adrenal insufficiency. DI can be transient, permanent, or remit and then recur later in a classic triphasic response with DI followed by SIADH followed by DI. Early morning cortisol levels should be measured to assess adrenal insufficiency. For patients with acromegaly, Cushing disease (CD), and prolactinomas, morning serum growth hormone, cortisol and prolactin levels, respectively, should be measured on postoperative day one and two to predict early and long-term remission. All patients should undergo a repeat full evaluation of pituitary function at least 6 weeks after surgery and then at the 12-week postoperative visit to confirm stability of endocrine function. Postoperative MRI is typically performed at the 12-week visit. After primary surgery, CD may be cured, persistent or recurrent. For recurrent and persistent CD, surgical reintervention, medical therapy, radiotherapy or bilateral adrenalectomy have to be taken into account. For persistence of acromegaly, repeated surgery, medical therapy or radiotherapy may be tried.

Title: How to chose the appropriate contraceptive?

Prof. Shaikh Zinnat Ara Nasreen¹

¹Prof. & Head (Obs/Gynae) Department, Z H Sikder Women's Medical College & Hospital

Contraceptive provides control over pregnancy timing and prevention of unintended pregnancy. Optimal use of contraceptives could avert an astounding 30% of maternal deaths particularly septic abortion. 214 million women have an unmet need for contraception (WHO 2018) including Bangladesh.

There are several issues to consider when deciding which method of contraception is right for the women -like age, life style, weight,risks of thromboembolism, personal history of liver disease,

heart diseases, efficacy and side effects of contraceptives and personal preference, psychosocial and cultural belief. Oral contraceptive pill (OCP) is 99% effective. Low dose contraceptive pill consists of 10-20 microgm estrogen has very minimum side effects in comparison to standard OCP and can be used for all healthy young women even women over 44 years, provided they are not smoker, obese and not having heart diseases. Fertility returns very soon after the stopping OCP. To avoid androgenic side effects of OCP, 4th generation of Progestins such as Drospirenone can be chosen which has anti mineralocorticoid activities. However combined Drospirenone pills are more thrombotic than OCP with 2nd generation levonorgestrel. As OCP regularise period, reduces heavy period, dysmenorrhoea, it may be good choice for women with AUB (abnormal uterine bleeding), PCOS, Endometriosis and in PID.

Progesterone only pills are safe in lactating women, it does not alter Blood pressure so it is safe alternative of combined pills. Levonorgestrel intrauterine device, implant and DMPA are long acting reversible contraceptives (LARC) and very effective. Copper IUCD is effective for 10 years and can be used in immediate postpartum and where estrogen is contraindicated. Women who have family complete, LARC are right options but as fertility return is delayed so new couple should avoid it. Barrier method in addition to contraception prevents sexually transmitted infection and HIV. But method failure and lack of motivation reduces its efficacy. Permanent methods like vasectomy and tubal ligation are not popular in our country, but during 3rd caesarean section routine ligation must be offered. Proper counselling is key to choose the appropriate contraceptive where the clinicians need to address any knowledge deficit, misconception or exaggerated concern about the safety of contraceptive methods. It remains a critical aspect in empowering women to make informed choices and shared decision.

Title: Hyperprolactinemia -Case based approach

Dr. Faria Afsana¹

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Hyperprolactinemia, defined by a high level of serum prolactin above range, is the most common hypothalamus-pituitary dysfunction. In nonpregnant and nonlactating women, the clinical picture mimics the puerperal period, characterized by irregular menses or amenorrhea, galactorrhea, infertility, and a decrease of libido. In men, hypogonadism, infertility, and decreased libido remains the complaint. There are Physiological, pathological, or pharmacological causes of hyperprolactinemia. Physiological hyperprolactinemia is transient and adaptive; whereas, pathological and pharmacological hyperprolactinemia are symptomatic and has unwanted long-term consequences. Patients with hyperprolactinemia may remain asymptomatic or can present with signs and symptoms of hypogonadism and galactorrhea. If serum prolactin is found elevated, the next step is to determine the cause by exclusion of physiological causes as pregnancy, pharmacological causes as drugs like domperidone, antipsychotics and pathological as hypothyroidism, renal and hepatic failure, intercostal nerve stimulation by trauma or surgery, prolactinomas, other tumors in the hypothalamus-pituitary region. An extensive history and physical examination are important to exclude causes of hyperprolactinemia and inquire about

signs and symptoms of hyperprolactinemia. Identifying the correct cause is important to establish the correct treatment. If all these causes are ruled out and pituitary imaging found normal, idiopathic hyperprolactinemia will be the diagnosis. In symptomatic patients, treatment with dopaminergic agonists is indicated. In the absence of symptoms, neither pituitary study imaging nor medical treatment is required.

Approach To Erectile Dysfunction In Diabetes

Dr. Shahjada Selim¹

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Until recently, erectile dysfunction (ED) was one of the most neglected complications of diabetes. In the past, physicians and patients were led to believe that declining sexual function was an inevitable consequence of advancing age or was brought on by emotional problems. This misconception, combined with men's natural reluctance to discuss their sexual problems and physicians' inexperience and unease with sexual issues, resulted in failure to directly address this problem with the majority of patients experiencing it. Luckily, awareness of ED as a significant and common complication of diabetes has increased in recent years, mainly because of increasing knowledge of male sexual function and the rapidly expanding armamentarium of novel treatments being developed for impotence. Studies of ED suggest that its prevalence in men with diabetes ranges from 35–75% versus 26% in general population. The onset of ED also occurs 10–15 years earlier in men with diabetes than it does in sex-matched counterparts without diabetes. A sexually competent male must have a series of events occur and multiple mechanisms intact for normal erectile function. He must 1) have desire for his sexual partner (libido), 2) be able to divert blood from the iliac artery into the corpora cavernosae to achieve penile tumescence and rigidity (erection) adequate for penetration, 3) discharge sperm and prostatic/seminal fluid through his urethra (ejaculation), and 4) experience a sense of pleasure (orgasm). A man is considered to have ED if he cannot achieve or sustain an erection of sufficient rigidity for sexual intercourse. Most men, at one time or another during their life, experience periodic or isolated sexual failures. However, the term "impotent" is reserved for those men who experience erectile failure during attempted intercourse more than 75% of the time. For better outcome in ED with DM optimal diabetes control, patient counselling and oral PDE5i constitute the 1st line of medical therapy.

Title: Graves' ophthalmopathy

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Graves' Ophthalmopathy is an inflammatory eye disease that develops in the orbit in association with autoimmune thyroid disorders. In majority (90%) cases, it is seen with current or past Graves' disease. Approximately a third of patients with Graves' disease have some sign or symptoms of Graves' ophthalmopathy, while only 5% have moderate to severe disease. The autoimmune

process, production of antibodies against self-antigens such as TSH receptor (TSHR) and IGF-1 receptor (IGF-1R), inflammatory infiltration, and accumulation of glycosaminoglycans (GAG) lead to edematous-infiltrative changes in periocular tissues. As a consequence, edema exophthalmos develops. The gradation of disease severity is mild, moderate to severe and sight threatening. Both the activity and severity of disease should be considered in therapeutic decisions regarding treatment of ophthalmopathy. The evaluation and management of Graves` Ophthalmopathy should be done in multidisciplinary approach combining Endocrinologists and Ophthalmologists and other expertise in other specialties like radiation therapy, plastic surgery, ENT and Endocrine surgery. However, a deeper understanding of the pathophysiology of the disease and their involvement of immunological processes may give rise to the introduction of new, effective, and safe methods of treatment or monitoring of the disease activity.

Title: Ketogenic Diet for Diabetes : Dream or Curse

Dr. M Saifuddin¹

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Ketogenic diet seem like the latest weight-loss craze, but it's actually been around for nearly a century. Developed in 1920s, this ultra-low-carb, high-fat diet was originally used to treat seizures in people with epilepsy but grab attention and popular among young generation and Diabetic patients for rapid weight reduction and hope to get numerous health benefits against Diabetes, Cancer, certain neurological disorders including Alzheimer's disease. Diabetic patients are following the diet as some persons claiming that reversal to non Diabetic state and controlling Diabetes without any medication is also possible with this diet. Ketogenic diet involves drastically reducing carbohydrate intake and replacing it with fat aiming to force body into metabolizing fat instead of carbohydrates. Burning fat seems like ideal way to lose weight and reduce appetite. The classic Ketogenic diet is not a balanced diet and has numerous risks. Ketogenic diet is high in saturated fat with link to atherosclerosis and heart disease. There is risk of Diabetic ketoacidosis due to discontinuation of Anti Diabetic medication or patients on SGLT2 inhibitor. Other potential risks include nutrient deficiency, deterioration of existing liver disease, renal problems due to protein overload and increased risk of osteoporosis. Available research on the Ketogenic diet for weight loss is still limited with small number of participants for limited period and without control groups. So long term outcome of Ketogenic diet is uncertain as very low carb diet is difficult to sustain with numerous risk and possibility of weight gain after give up of Ketogenic diet.

Title: State of the art lipid management

Dr. Ahmed Salam Mir¹

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Lipid management is a key component of both prevention and treatment of atherosclerotic cardiovascular diseases (ASCVD). The Framingham study in 1961 first identified serum

cholesterol as a risk factor for coronary heart disease. Further studies established that elevated level of low-density lipoprotein (LDL) cholesterol is an important risk factor for ASCVD. Current guidelines focus on maintaining optimum level of LDL cholesterol in persons with high ASCVD risk. For the last few decades, statins were the mainstay of lipid management, along with other drug groups including fibrates, ezetimibe and omega 3 fatty acids. Pro-protein convertase subtilisin/Kexin type 9 (PCSK9) inhibitors has opened a new horizon in the management of dyslipidemia. Whatever may be the treatment modality, it is imperative to make a personalized treatment plan for each individual patient with shared decision making and emphasizing lifestyle modification.

BESCON 20-ABS-1001

TITLE: Clinical, biochemical, metabolic outcome of Ramadan fasting in patients with type 2 diabetes mellitus: a real-world, multi-center, prospective observational study.

Dr. Nazmul Kabir Qureshi

Consultant (Endocrinology & Medicine), National Healthcare Network.

BACKGROUND: It is obligatory on all healthy Muslim adults to fast during Ramadan. Patients who are prone to develop hypoglycemia and hyperglycemia, many still insist on performing Ramadan fasting. It is estimated that 50 million people with diabetes fast each year² and majority of them lives in Asia-Pacific, Middle East, North Africa region and rest in Europe, North and South America.

OBJECTIVE: The study was conducted to understand clinical, biochemical, metabolic outcome of Ramadan fasting and to explore effects of pre-Ramadan education in type 2 diabetic patients who observed Ramadan fast.

METHODS: A real-world, multi-center, prospective, observational study was conducted at the diabetes OPD of National Healthcare Network (NHN) Uttara, Dhaka, Bangladesh and OPD of MARKS Hormone and Diabetes clinic, MARKS Medical College & Hospital in Dhaka, Bangladesh. Randomly selected type 2 diabetic patients were recruited 1 to 12 weeks prior to the Ramadan and followed up till 12 weeks post-Ramadan. A total of 271 participants completed satisfactory follow up. Doses of gliclazide, glimepiride, metformin and insulin were adjusted. Data was collected using a set of questionnaires in a face to face interview.

RESULT: The majority (80.1%) of participants received pre-Ramadan education and adjustment of medication. Significant reduction of body weight, body mass index (BMI) and blood pressure were reported after Ramadan fast ($p < 0.001$). None of the studied participants experienced severe hyper/hypoglycemia or acute complications requiring hospitalization or an emergency room visit. Metformin was the commonest prescribed anti-diabetic medication during pre [232(85.60%)] to post [234 (86.30%)] Ramadan follow-up. Premixed insulin was the commonest insulin during study period [Pre- vs. Post-Ramadan: 69 (25.50%) vs. 64 (23.60%)]. Mean of fasting and prandial

capillary blood glucose decreased from pre-Ramadan period to post-Ramadan period ($P < 0.05$). HbA1c decreased during post-Ramadan period compared to pre-Ramadan visit ($P = 0.13$). A significant reduction in the triglyceride level was observed during post-Ramadan follow up ($P < 0.05$).

CONCLUSION: The study revealed that a safe fasting can be observed with proper pre-Ramadan work-up. Ramadan fasting resulted into significant reduction of bodyweight, BMI, blood pressure, lipid profile and improved glycemic status in patients with type 2 diabetes.

BESCON 20-ABS-1002

TITLE: Frequency of Extended Spectrum Beta-Lactamases (ESBL) Infections Among Diabetic and Non-Diabetic Adult Patients, Common Isolates and its Association with Glycemic Status.

Dr. Nazmul Kabir Qureshi

Consultant (Endocrinology & Medicine), National Healthcare Network.

BACKGROUND: ESBL infection is frequent among both diabetic and non-diabetic adult subjects. Poor glycemic status worsen infections.

OBJECTIVE: Aim of this study was to find out frequency and pattern of ESBL infections among subjects with or without diabetes and to determine whether ESBL infection was more frequent among diabetic subjects and whether glycemic status was associated with ESBL infection pattern.

METHODS: This cross-section observational study was conducted among adult patient attending in United Hospital Limited, Dhaka, Bangladesh during 2016.

RESULT: A total of 99 subjects (male=34, female=65) were studied. Among them, 61 [male=26.2%, female=73.8%] were diabetic and rest [n=38, male=47.3%, female=52.7%] were non-diabetic [p .03]. Female had higher A1c% than male [7.82±2.23 vs 6.84±1.59, p .025]. Diabetic subjects had higher age [69.29±12.21 vs 61.71±20.60 years], A1c% [8.70±1.73 vs 5.51±.39], TC of WBC [14.55±5.25 vs 12.47±4.96 per cmm], Platelet count [262.82±81.41 vs 218.79±112.96 per 10x3/L] and ESR [49.60±16.35 vs 39.84±14.24 mmHg 1st h] than non-diabetic subjects. Among diabetic subjects, bacteria were more frequently isolated from urine sample (49.2%) followed by blood sample (18%), sputum (16.4%) and among non-diabetic, those were equally isolated from urine and blood sample (28.9% both) followed by sputum sample (18.4%). Both in diabetic and non-diabetic subjects, E coli was the most frequent bacteria [54.1% and 44.7% respectively p .72]. Other common isolates were K. pneumoni, pseudomonas, serratia etc. ESBL infection was more frequent among diabetic than non-diabetic subjects [36.1% vs 13.16% respectively, p .01]. FPG [11.04±5.13 vs 7.77±3.06 mmol/L, p.001], 2h PPG [14.15±6.68 vs 10.53±3.65 mmol/L, p .001], and A1c% [8.36±2.40 vs 7.15±1.85, p .009] were higher in subjects with ESBL infection and those with non-ESBL infections.

CONCLUSION: Female had higher A1c% than male. Diabetic subjects were more aged. Both in

diabetic and non-diabetic subjects, E coli was the most frequent bacteria. ESBL infection was more frequent among diabetic than non-diabetic subjects. A1c% were higher in subjects with ESBL infection than those with non-ESBL infections.

BESCON 20-ABS-1003

TITLE: Characteristics of Coronavirus Disease 2019 in Hospitalized Patients with Pre-existing Diabetes Mellitus- Lessons learnt from Bangladesh.

Dr. Md. Shahed Morshed

Emergency medical officer, Kurmitola General Hospital, Cantonment, Dhaka.

BACKGROUND: Diabetes mellitus (DM) is one of the established risk factors for coronavirus disease 2019 (COVID-19) progression and fatal outcome. However, data on these patients are scarce in literature, especially from a South Asian perspective.

OBJECTIVE: This study is aimed to illustrate the clinical and laboratory characteristics of COVID-19 in patients with pre-existing DM from a South Asian setting, Bangladesh. In addition, this study explored the outcome (survived/ deceased) of these patients including the need for intensive care unit (ICU) support.

METHODS: This retrospective observational study was conducted in Kunitola general hospital, Dhaka during the month of June 2020 among hospitalized RT-PCR confirmed COVID-19 patients with pre-existing DM. Data on clinical findings, laboratory parameters, treatment and outcomes of the patients were collected from hospital medical records using a structured questionnaire. Pre-existing DM was defined by patients' history of DM and intake of antidiabetic drugs. Logistic regression was used to find out the associations with ICU requirement and final outcomes. The IRB of Biomedical Research Foundation (BRF), Bangladesh approved the study protocol.

RESULT: A total of 921 COVID-19 patients admitted during the study period. Among them around 25% (231) had pre-existing DM. Nearly one third (31%, 72) of all DM patients required ICU. While the overall mortality of hospitalized patients with COVID-19 was only 2.8% (58/921), mortality rate (11.3%, 26) was four times higher among patients with pre-existing DM. Notably, nearly 45% (26/58) of all deceased patients had DM. Several clinical (age >60 years, ischemic heart disease) and biochemical variables (leukocytosis, high neutrophils-lymphocytes ratio and high blood glucose at presentation, high ferritin & positive D-dimer) were associated with increased risk of ICU requirement and in-hospital death among hospitalized COVID-19 patients with DM.

CONCLUSION: This study showed the impact of COVID-19 infection among patients with pre-existing DM which underscores the need of early detection and meticulous treatment in this group of patients.

BESCON 20-ABS-1004

TITLE: Prevalence And Associated Factors Of Depression Among Patients With Diabetes: A Cross-sectional Study In A Tertiary Care Hospital

Dr. Nazma Akter

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BACKGROUND: Patients with diabetes mellitus (DM) have a poorer quality of life when compared with patients without DM. In fact, one in every five diabetic patients suffers from co-morbid depression, which can lead to poor management, poor compliance with treatment, and low quality of life.

OBJECTIVE: This study aimed to estimate the prevalence of depression and to identify its associated factors influencing depression among patients with type 2 diabetes.

METHODS: A cross-sectional study was conducted among 318 diabetic patients attending a diabetic clinic in a tertiary care hospital in Dhaka, Bangladesh. Depression was assessed among the subjects using Patient Health Questionnaire-9 (PHQ-9); a standardized questionnaire developed in the United States of America. Demographic, clinical, and diabetes-related information were collected using a semi-structured questionnaire.

RESULT: The prevalence of depression among DM patients was 64.2% (male vs. female: 17.9% vs. 46.2%). According to PHQ-9 tool, 35.5% of patients showed no depression (male vs. female: 9.7% vs. 25.8 %), 30.8% had mild depression (male vs. female: 11.0 % vs. 19.8 %), 18.9% had moderate depression (male vs. female: 5.0 % vs. 13.8%), some (11.6%) had moderately severe depression (male vs. female: 1.6% vs. 10.1 %), and only a few (3.1%) had severe depression (male vs. female: 0.6 % vs. 2.5 %); [p=0.12]. Several socio-demographic factors were found to be positively associated with depression including increasing age, rural residence, low education, unemployment or retired, and the status of being unmarried or widow; [p<0.05]. The longer duration of diabetes (>10 years), presence of diabetic complications and other chronic diseases such as hypertension, dyslipidemia, etc. also were found to be associated with depression; [p<0.001].

CONCLUSION: Depression was found to be particularly high among the study population. Since depression could significantly hinder patient's adherence to treatment, there is an urgent need for early diagnosis and treatment. This calls for the integration of mental health care into the management of diabetes.

BESCON 20-ABS-1005

TITLE: Preoperative Low Cortisol And Thyroxine In Pituitary Macroadenoma: Does Tumor Size Matter?

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BACKGROUND: Anterior pituitary dysfunction is one of the commonest mass-effect related features of pituitary macroadenoma and it is imperative to evaluate adrenocortical and thyroid status before surgery to initiate appropriate hormonal replacement.

OBJECTIVE: To observe the correlation of basal cortisol and thyroxine with maximal tumor diameter in pituitary macroadenoma patients excluding those with autonomous secretion of ACTH or TSH.

METHODS: In this cross-sectional study, 56 patients [median age 33.5, IQR 26.5-40.0 years; 33 (59%) female] with pituitary tumor [Non-functional 30 (53.6%), functional 26 (46.4%)] awaiting surgery at the department of neurosurgery, National Institute of Neurosciences and Hospital, Dhaka were included purposively from July 2018 to October 2020. Clinical information was obtained through direct history and examination. Laboratory and imaging records were evaluated for anterior pituitary hormonal axes and characteristics of tumor. Preoperative morning serum cortisol $<5 \mu\text{g/dL}$ with low/normal ACTH was taken as evidence of secondary hypoadrenalism and low FT4 with low/normal TSH as secondary hypothyroidism.

RESULT: Among the participants, secondary hypoadrenalism was present in 20 (35.7%) and secondary hypothyroidism in 8 (14.3%) participants. Preoperative thyroxine level had significant negative correlation with maximal tumor diameter ($r=-0.366$, $p=0.006$) with every 1 cm increase in diameter increases 1.9 (CI 1.03-3.59, $p=0.040$) fold risk of secondary hypothyroidism. On the other hand, basal cortisol had no significant correlation with maximal tumor diameter ($r=-0.030$, $p=0.824$), neither there was increased risk of secondary hypoadrenalism with increase of tumor size (OR 0.91; 95% CI 0.60-1.38; $p=0.650$). The median tumor diameter of participants with hypoadrenalism was 3.0 cm (range 1.0-6.3 cm) and with hypothyroxinemia was 4.5 cm (range 2.6-5.9 cm).

CONCLUSION: Although tumor size is well correlated with thyroxine, there is no significant correlation of it with basal cortisol in patients with pituitary macroadenoma.

BESCON20-ABS-1006**TITLE: Patterns Of Thyroid Dysfunction In Metabolic Syndrome Patients And Its Relationship With Components Of Metabolic Syndrome****Dr. Nazma Akter**

Assistant Professor (Endocrinology & Metabolism), MARKS Medical College & Hospital, Dhaka, Bangladesh.

BACKGROUND: Metabolic syndrome (MetS) consists of a constellation of metabolic abnormalities which include central obesity, hyperglycemia plus insulin resistance, high

triglycerides plus low HDL cholesterol and hypertension. A growing body of evidence suggests that metabolic syndrome is associated with endocrine disorders including thyroid dysfunction. Thyroid dysfunction in metabolic syndrome patients may further add to cardiovascular disease risk thereby increasing mortality.

OBJECTIVE: This study was done to assess thyroid function in metabolic syndrome patients and evaluate its relationship with the components of metabolic syndrome.

METHODS: A cross sectional study was carried out among 346 metabolic syndrome patients at a Hormone & Diabetes clinic in a tertiary care hospital, Dhaka, Bangladesh. Anthropometric measurements (height, weight, waist circumference) and blood pressure were taken. Fasting blood samples were analysed to measure glucose, triglyceride (TG), high density lipoprotein (HDL) cholesterol and thyroid hormones [Thyroid stimulating hormone (TSH) and Free Thyroxine (FT4)]. Patients were said to be euthyroid if all thyroid hormone levels fell within reference range. Subclinical hypothyroidism (SCH) was considered if TSH >5.0 mIU/L and free T4 is within normal reference value (0.71-1.85 ng/dL). Overt hypothyroidism was defined as TSH > 5.0 mIU/L and free T4 < 0.71 ng/dL.

RESULT: Thyroid dysfunction was seen in 46.8 % (n = 162) metabolic syndrome patients. Subclinical hypothyroidism (34.1 %) was the major thyroid dysfunction followed by overt hypothyroidism (12.7 %). Thyroid dysfunction was much common in females (37.0%) than males (9.9%) but not statistically significant; [p = 0.21]. Triglyceride showed significant positive correlation with TSH level (r = 0.169, p = 0.002) and negative correlation with free T4 (r = -0.150, p = 0.005).

CONCLUSION: Thyroid dysfunction, particularly subclinical hypothyroidism is common among metabolic syndrome patients, and is associated with one component of metabolic syndrome (triglycerides). Further study is needed to evaluate the mechanism of this correlation.

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- Submit the completed application form to BES SECRETARIAT



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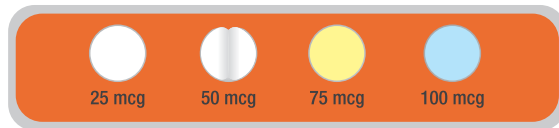
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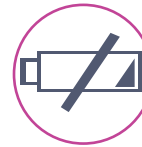
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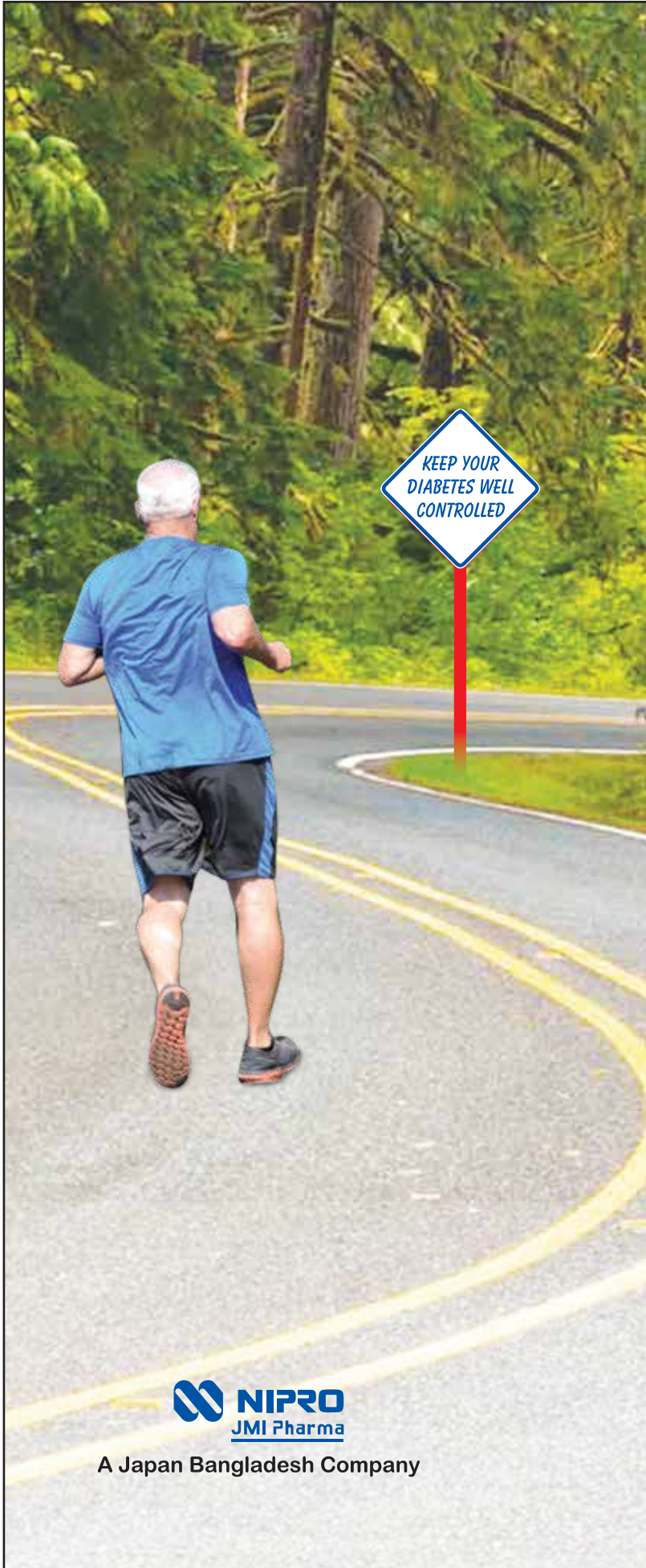
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1. N Engl J Med. 2008; 358:2560-2572 2. Curr Med Res Opin 2012; 28:1-8
3. <https://www.who.int/diabetes/publications/guidelines-diabetes-medicines/en/>



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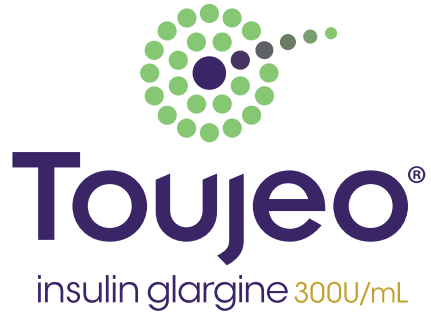
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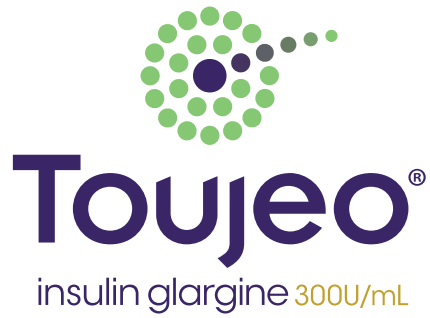
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Charting New Paths with Insulin Co-formulation IDegAsp: The Body of Evidence and Clinical Role

Type 2 diabetes mellitus is a progressive disease characterized by insulin resistance and a gradual decline in β -cell function that eventually necessitates the use of exogenous insulin by many patients. Recent guidelines highlight the need to tailor treatment strategies and/or targets to individual patient characteristics, including age, existing comorbidities and the duration of diabetes. Several landmark studies demonstrate the importance of maintaining tight glycaemic control, to reduce the risk of long-term diabetes-related complications (e.g. UKPDS; DCCT/EDIC). Insulin degludec/insulin aspart (IDegAsp) is a soluble combination of insulin degludec (IDeg), a new ultra-long-acting basal insulin, and the rapid-acting insulin analogue, insulin aspart (IAsp). The formulation of IDegAsp has been designed to maintain their independent pharmacokinetic/pharmacodynamic characteristics which should translate into a sharper separation of the bolus and the basal components compared to currently available preparations.

Two Phase 3 randomized, open label, multicentre, treat-to-target, non-inferiority studies (1 initiation & 1 intensification) of 26 weeks and 38 Weeks duration incorporating a total of 828 Type 2 DM patients (296 Insulin Naïve and 532 Insulin experienced) were conducted to identify the efficacy and safety of Once and Twice daily IDegAsp compared to Basal and Basal Plus & Basal Bolus regimen (BOOST-Japan Study by Onishi et al. and Step by Step Trial by Philis-Tsimikas et al.).

Mean HbA_{1c} reduction was superior with once daily IDegAsp compared to IGlax (estimated treatment difference, ETD; IDegAsp-IGlar: -0.28% points [-0.46; -0.10] 95% CI, $p < 0.01$) as per Onishi et al. and non-inferiority was confirmed against IGlax U100 + IAsp (estimated treatment difference: 0.07% (95% confidence interval [CI]: -0.06; 0.21)) as per Philis-Tsimikas et al.

At the end of both trials, mean fasting plasma glucose (FPG) was similar for IDegAsp and IGlax and across IDegAsp and IGlax U100 + IAsp groups respectively.

IDegAsp was associated with numerically lower rates of overall confirmed (27%) and nocturnal confirmed hypoglycaemia (25%) versus IGlax (estimated rate ratio IDegAsp/IGlar: 0.73 [0.50; 1.08] 95% CI, $p = \text{NS}$, and 0.75 [0.34; 1.64] 95% CI, $p = \text{NS}$, respectively) as per Onishi et al. During treatment initiation (Week 0–26) there were significantly fewer nocturnal confirmed symptomatic episodes per subject associated with IDegAsp (estimated rate ratio [RR] 0.55 [95% CI: 0.34; 0.90]; a 45% rate-reduction versus IGlax U100 + IAsp and the entire treatment period (Weeks 0–38) RR 0.61 [95% CI: 0.40; 0.93]; a 39% rate-reduction versus IGlax U100 + (2/3)IAsp as per Philis-Tsimikas et al.

Mean daily insulin doses were similar between groups at end-of-trial in BOOST-Japan Study. On the other hand, in Step by Step trial, the total insulin dose was significantly lower with IDegAsp OD versus IGlax U100 OD + IAsp OD at Week 26 (70.9 U versus 79.4 U, respectively [a 10.7% lower dose]; odds ratio (OR) 0.88 U [95% CI: 0.81; 0.95]). By the end of the trial, the dose associated with IDegAsp was significantly lower (6.6%) than that associated with IGlax U100 + IAsp (83.4 U versus 89.3 U, respectively; OR 0.91 U [95% CI: 0.83; 0.99]).

Safety profiles were similar across treatment groups in both of the studies.

In conclusion, IDegAsp OD & BID are effective treatment initiation & intensification options versus basal & multiple injection basal-bolus therapies, achieving superior or similar glycaemic control, with numerically & significantly less nocturnal hypoglycaemia with favourable safety profile.

Reference:

1. Onishi et al. Diabetes Obes Metab 2013;15:826–32
2. Philis-Tsimikas et al, Diabetes Res Clin Pract, 2019. 147:157-165



Cardiovascular Risk Reduction with Once-weekly Semaglutide in Subjects with Type 2 Diabetes: A Post Hoc Analysis of Gender, Age, and Baseline CV Risk Profile in the SUSTAIN 6 Trial

Cardiovascular disease (CVD) is the leading cause of morbidity and mortality in people with type 2 diabetes (T2D) and diabetes itself confers a substantial independent risk of coronary heart disease, stroke, and death from other vascular causes. Current diabetes guidelines recommend multifactorial CV risk management and the preferential use of a glucagon-like peptide-1 receptor agonist (GLP-1RA) or sodium-glucose cotransporter-2 inhibitor with proven CV benefits as a first-choice add-on to metformin in patients with T2D and established atherosclerotic CVD. Semaglutide is a GLP-1 analogue approved as a once-weekly, subcutaneous treatment for T2D. The phase 3 SUSTAIN (Semaglutide Unabated Sustainability in Treatment of Type 2 Diabetes) clinical trial program evaluated the efficacy and safety of Semaglutide in subjects with T2D in a range of patient populations across the continuum of diabetes care. In the SUSTAIN 6 CV outcomes trial (CVOT), once-weekly Semaglutide (0.5 or 1.0 mg) added to standard of care significantly reduced the occurrence of a first major adverse CV event (MACE: CV death, nonfatal myocardial infarction [MI], or nonfatal stroke) vs placebo over 2 years in 3297 subjects with T2D and high CV risk. Given the increasing emphasis on individualized patient care in the management of T2D, this post hoc analysis assessed the effects of gender, age, and baseline CV risk on the reduction of CV risk in the SUSTAIN 6 trial.

Subjects were grouped according to gender, age (50–65 years and > 65 years), and CV risk profile at baseline (prior myocardial infarction [MI] or stroke vs no prior MI or stroke, and established CV disease [CVD] vs CV risk factors alone, including subjects with chronic kidney disease). Time to MACE and its individual components (CV death, nonfatal MI, nonfatal stroke), hospitalization for unstable angina or heart failure, and revascularization (coronary and peripheral) were analysed for all subgroups. Additional analyses were performed for gender and age to investigate change from baseline in HbA1c and body weight, as well as tolerability.

A total of 3297 subjects were included. The majority of subjects (60.7%) were male; 43% were > 65 years of age; 41.5% had a history of MI or stroke; and 76.8% had established CVD. Compared with placebo, Semaglutide reduced the risk of the first occurrence of MACE and each MACE component consistently across all subgroups (gender, age, and baseline CV risk profile). Revascularizations, HbA1c and body weight were also reduced consistently across all subgroups compared with placebo. Gastrointestinal adverse events in all treatment groups were more common among women than men, but rates of premature treatment discontinuation were similar for both genders.

In this post hoc analysis of the SUSTAIN 6 trial, once-weekly Semaglutide vs placebo reduced the risk of MACE in all subjects regardless of gender, age (50–65 and > 65 years), or baseline CV risk profile (prior MI or stroke vs no prior MI or stroke or established CVD vs CV risk factors alone). In addition, similar reductions in HbA1c and weight were observed with Semaglutide compared with placebo across gender and age groups, and safety profiles were comparable between men and women and in subjects above or below the age of 65 years.

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