NOTA KURSUS: **NHAM Congress 2023**

TARIKH: 16TH -18ST JUNE 2023

VENUE: KUALA LUMPUR CONVENTION CENTRE

DISEDIAKAN OLEH: DR SITI NOOR AZLIDAH BINTI ALI

1) Type 2 Diabetes is a major cause of first & recurrent CV morbidities
2) Women & young people with diabetes had 2-3x excess death due to CHD & ischemic stroke.
3) 5 risk factors above threshold with 2 times excess risk of CV events & death are:
    a) Smoker
    b) HbA1c >7%
    c) SBP>=130mmHg (>=140 if low risk)
    d) TC > 4mmol/L (155mg/dL)
    e) TG>1.7mmol/L (150mg/dL)
4) To prevent complications and premature death by:
    i) Attainment of multiple treatment goals:
        -HbA1c <6.5-7%
        -Blood pressure <130/80 or <140/90mmHg
        ove-LDL cholesterol <1.4-2.6mmol/L
        -In obesity, achieved weight loss >=5%
    ii) Appropriate use of organ-protective medications:
        -Renin-angiotensin system inhibitors
        -Statins
    iii) ASCVD or multiple risk factors
        -Early & appropriate use of either GLP1RA(especially with high stroke risk) or SGLT2i
        -Irrespective of glycaemic control
    iv) Heart failure with either reduced, mildly reduced or preserved EF
        -Early & appropriate use of SGLT2i
        -Irrespective of DM status
    v) Chronic Kidney Disease
        -Early & appropriate use of SGLT2i(irrespective of DM status)
        -Consider nonsteroidal mineralocorticoid antagonists (in T2DM)
5) Mineralcorticoid Receptor(MR) over-activation is a major driver of end-organ damage through inflammation and fibrotic effects.
6) MR antagonists(MRA) have been shown to be nephroprotective in small studies but are limited by side effects like hyperkalemia.
7) Non steroidal MRA(e.g. finerenone) are potent & more selective agents that have been studied in large trials to provide renal & cardiovascularprotection to diabetic nephropathy patients.
8) Non steroidal MRA have now been included in guidelines as beneficial for the treatment of Diabetic Kidney Disease.
9) Beneficial effects of trimetazadine in myocardial ischaemia:
    - as effective as 1st line vs beta blocker & CCB
    - fast antianginal effects within 2 weeks of initiation
    -effective in Microvascular Disease
    -effective in Diabetic patients with angina
    -effective in heart failure patients with angina
    -excellent tolerability (no effects on heart rate/blood pressure)
    -no metabolic disturbances (neutral effect on lipids/glycaemia

10) Medical mangement of stable angina:

a) Management of symptoms with anti-ischemic therapy to prevent attacks of angina by decreasing myocardial oxygen consumption (lowering heart rate, blood pressure, myocardial loading or myocardial contractility) & increasing myocardial oxygen supply (increasing coronary blood flow).

b) Anti ischemic therapy includes- beta blocker, nitrates, CCB, trimetazidine, ivabradine, ranolazine & nicorandil

c) Choice should be individualised depending upon presence of co-morbidities(such as asthma)and physiological parameters such as HR, BP, LV function and cost & availability.

11) Blood Pressure management:

-Essential : target BP reduction by at least 20/10mmhg, ideally <140/90mmHg

-Optimal: i) <65yrs=> BP target <130/80mmHg if tolerated (but >120/70mmHg)

ii)>65yrs=> BP target <140/90mmHg if tolerated but consider an individualised BP target in the context of frailty, independence and likely tolerability of treatment.

12) True Resistant Hypertension:

-Uncontrolled BP despite being on ≥ or 3 maximally tolerated antihypertensive of which one is a diuretic.

-Uncontrolled both by office & 24-H ambulatory BP monitoring with confirmed medication adherence.

13)Significance of RBBB:

-Can be normal

-Increases with age up to 11.3% at 80yrs of age

-**BUT** also can be:

- Myocardial disease(Myocarditis, infiltrative disease)
- RV pressure or volume overload

13)Red Flags for Right Bundle Branch Block:

-Symptomatic of CVD

-Presence of signs & symptoms of cardiac failure

-Structural abnormality

-Presence of concomitant Left Anterior Fascicular Block/Left Posterior Fascicular Block (all cause mortality & HF)

-Alternating LBBB with RBBB

14) LBBB seen in:

-rate- related LBBB: tachycardia & bradycardia

-Coronary artery disease

-Surgical Septal Myomectomy

-Dilated Cardiomyopathy/myocardial disease

-Conduction disease

-Aortic valve intervention

15)T2DM treatment and the role of GLP-1 Ras:

-Treatment challenges in T2DM are poor glycaemic control, hypoglycaemic episodes, weight gain, & clinical inertia.

-Incretin-based mechanisms in glucose homeostasis represent important therapeutic targets.

-Treatment guidelines recommend initiating GLP-1 Ras & SGLT2 inhibitors in patient with high/very high ASCVD risk.

-GLP-1 RA is the preferred 1st injectable for patients with T2DM:

-Significant HbA1c reduction in key clinical trials

-Benefits on weight management

-Acceptable tolerability profile

16)Globally many ASCVD patients are not at LDL-C , because of many reasons includes side effects, non-adherence, lack of access(including affordability), physician inertia-underutilization of high intensity statin + ezetimide & failure to uptitrate.
17)Sustained, intensive LDL-C lowering -key to prevent future MACE events & altering the natural progression of atherosclerosis.
18)Beyond statins & ezetimide, PCSK9 targeted therapies-very effective for substantial further LDL-C lowering with good patient tolerance.
19) Who needs statin?

Very High CV Risk	High CV Risk
*Established CVD *Diabetes with CVD/other TOD or ≥3CV risk factors *CKD with GFR < 30ml/min/1.73m2	*>20% 10 year CVD risk *Diabetes ≥ 10 years without TOD +other CV risk factor *CKD with GFR ≥30 to <60ml/min/1.73m2

20) Risk stratifications of CV Risk:-
-Intermediate(moderate)CV Risk:
*10year risk for CVD of 10-20%
*Diabetes <50 year old & <10 year duratuin & no CV risk factor
-Low Risk Individuals:
*10year risk for CVD <10%
21)Subjects who had ever used statins had significantly higher risk of developing DM compared with those who had never used statins.
22) Increase in the duration of statin use, the corresponding risk of DM was proportionally increased
23)Sick Day Protocol - temporarily withhold SGLT2i
-keep drinking & eating(if possible)
-check BG & blood ketone levels more often
-seek medical help early
24)Chronic alcohol use is a potential risk factor for T2DM->insulin resisteance & pancreatin B cell dysfunction->prerequisite for DM
25)Alcohol consumption in diabeted is controversial->small amount of alcohol enhanced the postprandial increment in insulin and attenuated the postprandial rise in in glucose.
26)Why exercise in CVD? Regular exercise
- reduce CVD risk & CVD mortality
-as primary & secondary prevention
27)Cardioprotective effect of exercise -CV & muscular fitness & improved CV risk factors
28)**Cardiac rehabilitation** services is a medically supervised program:
->to overcome cardiac symptoms & limitations
->for secondary prevention of CVD
->improve overall quality of life
29)**Nutrition recommendations**:
-should consume a healthy diet that emphasizes the intake of vegetables, fruits, nuts, wholegrains, lean animal/ vegetable protein and fish.
- minimizes intake of transfats, processed meats, refined carbohydrates and sweetened beverages.
30)For overweight & obese adults, counselling & calorie restriction are recommended for achieving & maintaining weight loss.
->achieve BMI < 23
->reduce 5-10% of initial weight in 6 months
->waist: men <90cm, women <80cm
->benefits to reduce 10% TC, 30% TG, 15%LDL, & inc 8% HDL
->reduce 10mmhg blood pressure