WORKSHOP II – NEWLY DIAGNOSED TYPE 2 DIABETES : CONSENSUS GUIDELINES FOR MINIMUM BASIC CARE

PERSONS AT RISK

Those at risk of type 2 diabetes mellitus include persons with:

Age above 45 years
Family history of diabetes
Obesity
Sedentary life style
Bad obstetric history
Tuberculosis, recurrent infections and non-healing ulcers.
Hypertension, hyoperlipidemia, coronary heart disease [CHD] and cerebrovascular disease
[CVD]
History of long term treatment with steroids, estrogens, thyroxine, phenytoin, thiazide diuretics and beta blockers.

CRITERIA FOR DIAGNOSIS : CLINICAL SUSPICION

Persons with type 2 diabetes mellitus may present with the following signs and symptoms :

Easy fatiguability or tiredness,
Polyuria, polydipsia, polyphagia,
Pruritus vulvae or balanitis,
Weight loss,
Visual refractory changes,
Periarthritis shoulders,
Paresthesias in the legs,
Muscle cramps,
Erectile impotence,
Delayed would healing,
Giddiness and
Ants at the site of urine voiding.

However, often patients with type 2 diabetes are asymptomatic.

ADA CRITERIA FOR DIAGNOSIS :

Random plasma glucose > 200 mg/dl [> 11.1 mmol/l] plus classic symptoms

Or

FPG > 126 mg/dl [> 7.0 mmol/l]

Or

2-hour PG > 200 mg/dl [> 11.1 mmol/1] on OGTT .

RECORDS

1. Basic Demographic Data:

It is recommended that the minimum basic data be collected for all newly diagnosed persons with diabetes. This data should include the following.

Name, Age, Gender,
Present and Previous address,
Religion, Education, Marital status,
Occupation, Socio-economic status,
Level of physical activity, Life style,
Present and past use of tobacco and alcohol ,
Previous illness, Co-morbid events,
Evidence of diabetes in the family, and
Obstetric history in women.

2. Physical Examination :

Anthropometrical measurements – weight and height , body mass index (BMI) and waist to hip ratio [WHR].
Recording of the blood pressure
Examination of eye and foot-clinical examination should include complete examination of foot and foot pluses.
Note: Refer to an ophthalmologist if there is any evidence of an ophthalmologic complication or visual impairment.

3. Laboratory Investigations :

Fasting and 2-hour post-prandial plasma glucose should be done at least once in a fortnight in uncontrolled diabetics and at least once in three months in controlled diabetics.

The other essential tests in addition to the above include :

Urine albumin , glucose and ketones
Haemoglobin %
Chest X-ray.

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Measurement of glycated haemoglobin (HbA1c) level every three months is very useful for monitoring glycemic control. However, this test may not be universally available or affordable and hence is not considered mandatory here. Wherever possible this test must be done.

To detect or rule out target organ damage or associated complications, additional lab tests should be carried out at diagnosis and at periodic intervals as described in the section on complications.

TARGETS FOR CONTROL :

It is recommended that

Venous plasma glucose be maintained within the following range:
Fasting : 80-120 mg/dl
2 hr.Post Prandial : 120-160 mg/dl
Blood pressure should be maintained below 130-80 mm of Hg.
Efforts must be made to maintain body weight, BMI and WHR within the desirable range.

PATIENTS EDUCATION PROGRAMME

The basic minimum patient education should include :

Dietary principles
Reasons for treating even if asymptomatic
Avoidance of tobacco and alcohol
Recognising and managing hypoglycaemia\Timing of drugs
Educating family members
Need for regular follow-up
Self monitoring of blood glucose

PRINCIPLES OF MANAGEMENT

Non Pharmacological Therapy : Non pharmacological therapy should be tried for four weeks and only if good glycemic control is not obtained by that time, should drug therapy be initiated.

Nutrition :

The following are the basic nutritional recommendations for this group of patients :

Adequate caloric intake with the objective to optimize body weight.
Ethnic pattern of food to be maintained
Refined sugars to be omitted
Reduction in total fats
Fasting and feasting to be discouraged

In addition, stress management and repeated reassurance is also recommended.

Exercise :

All patients should exercise regularly regardless

Of their body weight and if advised to walk, should gradually build up to at least 30 minutes of walking.
The type and timing of exercise should be at the patient's convenience,. Frequency should preferably be daily, to make it a habit.
Exercise in the fasting state or after a heavy meal should be avoided.
The physical fitness levels of the patient should be ascertained before any rigorous exercise programme is recommended.
If the patient can learn and practice – Yoga, it may be a useful form of exercise.

Pharmacological Therapy

Pharamacological therapy should be initiated when diet and exercise alone fall to achieve good glycemic control.

Drug therapy may be initiated with any of the four classes of oral drugs presently available in the market. These include
Miglitinides – Repaglinide
α - Glucosidase inhibitors – Acarbose
Biguanide – Metformin
Sulphonylureas _ Glibenclamide, Glipizide, Glyclazide or Glimerperide

The following points should be noted prior to initiating drug therapy:

Avoid long acting OHAs i.e. Glibenclamide in elderly patients > 60 years of age
Metformin is preferred and recommended in overweight and obese patients.
Insulin is indicated when patients present with
- History of weight loss,
- Severe hyperglycaemis [i.e. RBS > 300 mg/dl] , and
- Stressful situations