

Diabetes

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Short Communication

"Thou seest I have more flesh than another man and therefore more frailty" -William Shakespeare

Diabetes and obesity term was coined by- Ziv & Shafir. WHO called it a 21st century pandemic. Obesity is a Chronic disorder of excessive body fat when BMI ≥ 30 kg/m². Prevalence- 15% to 30% in Europe in adults. BMI- independent of body height & correlates well with body fat mass. 2/3rd of women – obese at diagnosis of T2DM. EPIC Post dam cohort study- weight gain of 1 BMI unit increases risk of T2DM by 25% (25-40 yrs.). Over nutrition & hyperglycemia in pregnancy- foetal hyperinsulinemia, hyperleptinemia- persistent malfunctioning of hypothalamic centres controlling energy homeostasis & metabolism- lifetime risk for obesity and T2 DM. "HAMBURGER-PIZZA- COLA CULTURE" "HAMBURGER-PIZZA- COLA CULTURE" of the day has ready availability of highly palatable energy dense low-cost food and sweetened beverages and aggressive commercial food production, work from home, low physical activity are all responsible for Diabetes. FFA can directly inhibit insulin action. Intramyocellular lipid accumulation leads to insulin resistance. Intra-abdominal fat cells – lipolytically more active than subcutaneous fat and have greater accumulation of lymphocytes and macrophages- more pro inflammatory substances. Visceral adipose tissue directly drains into the portal vein & thus the liver is directly exposed to FA. Proteins released from this active fat depot promotes insulin resistance.

Difficult to treat Diabetes than Obesity alone. Energy expenditure decreases with age. Focus more on blood glucose level only. Recent meta-analysis- low carb, low glycaemic index, Mediterranean and high protein diet should be with the recommendation.

Antidiabetic Drugs and Body Weight

DCCT trial showed intensified Insulin therapy leads to wt. gain while UKPDS trial showed an Insulin t/t- 7 kg wt. gain over 12 yrs. of t/t. SU- glibenclamide showed a 5 kg wt. gain in UKPDS while Glitazones led to a weight gain of 4-5 kg wt. gain in subcutaneous fat. Metformin & Alfa glucosidase inhibitors users and moderate wt. loss. DPP-4 inhibitors- wt. neutral. GLP1RA showed exenatide/ liraglutide/dulaglutide- substantial wt loss. 2-3 kg wt loss due to urinary loss of glucose was seen in SGLT2 Inhibitors. Bariatric Surgery is recommended in the treatment diabetes when T2DM with BMI ≥ 35 kg/m². To conclude obesity is most important risk factor for developing T2DM. Ectopic fat distribution. Weight management is central component of treatment of Diabetes. Low energy, high protein Mediterranean diet with increased physical activity should be the main principle in the management of Diabetes. The easy availability of tinned food and canned and bottled beverages promoted by the government should be looked into for contributing to increased incidence of Diabetes.



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