

E. Book:

OBESITY
RECENT ADVANCES AND CURRENT CONCEPTS

By:

Dr. R.G. Wiseman Pinto
Professor of Pathology
Former Dean Goa University
Former Executive Council and Academic Council Member of Goa University
President Asian Society of Cytopathology

November 2024

Obesity stands out today as being a Global problem

The following article will carry the different insights and measures required to tackle this problem.

In the world today there are 1.1 billion obese people accounting for 14% of the world's population.

It is estimated that By the year 2035 , 21% of the world's population will be obese.

Obesity week 2024 was a Global Conference on Obesity held at San Antonio ,Texas ,USA ,between 2nd to 6th November 2024.

Obesity can be regarded as Clinical Obesity

A Science , which has to be tackled at a Multi dimensional and in a Multi pronged manner .

This involves numerous agencies ,Government ,Non Government , Pharmas ,public policy , Education, Research ,Prevention., School education , integration , Corporates , Superspeciality doctors , speciality doctors , Medical practitioners of all systems of Medicine. Paramedical and Nursing personnel, Medical students ,interns ,College students , Administrators , Media , Religious groups, and Media.

Obesity is associated with excess fat accumulation in the body

BMI Body Mass Index over 25 is overweight

BMI above 30 is obese or the measure of obesity.

Important causes

1 genetic ,familial

2 diet ,foods

3 excess alcohol intake

4 no exercise

Other causes

Hypothyroidism

Medicines like birth control pills ,anti depressant medicines , anti psychotic medicines

Other causes

Those who quit smoking ,anxiety ,Stress, no proper sleep.

Pharmaceutical innovations

In obesity

Injectable drugs

1 Zepbound

Tirzepatide

Marketed by Eli Lilly ,USA

2 Wegovy

Semaglutide

Marketed by Novo Nordisk ,Denmark

Both these are subcutaneous injections given once a week

To be administered life long

The cost in india is approx RS 1.2 lakhs to 1.5 lakhs per person per month.

Others which are in the research and clinical trials phase

Weight loss pills

Tablets

To be Marketed in future once approved by

Viking Therapeutics

Zealand

AstraZeneca

These will capture and storm the markets soon

Injectable medicines

Tirzepatide

Zepbound

By Eli Lilly ,USA

Mechanism of Action.

It mimics 2 GUT Hormones that regulate glucose, digestion.and appetite

This molecule

1 stimulates the Pancreas to release insulin

2 slows the passage of food through the GIT
3 Acts on the area of the brain that regulates appetite
It acts like
GIP Glucose dependent Insulinotropic Polypeptide
and
GLP 1 Glucagon like Peptide Receptor Agonist 1

Individuals know this Injection
Body weight is Decreased by 16%
1 mg subcutaneous Injection per week

Contraindication
1 Medullary thyroid carcinoma
2 MEN 2 Multiple Endocrine Neoplasm 2 Syndrome
Approved in 2022

Wegovy
Semaglutide
By Novo Nordisk Denmark

Mechanism of Action
Glucagon like Peptide 1 Receptor Agonist
It
Decreases the production of Glucagon
Decreases blood glucose
Decreases the body's needs to store excess glucose as fat.

Persons taking this medicine Body weight Is Decreased by 14%

These drugs are costly
Given by subcutaneous injections
Side effects are minimal GIT like nausea, Diarrhea & Constipation.
There is a Reported case of serious adverse effect
This will be discussed in the end.

Weight loss pills or Tablets are in the research and clinical trials phase
By

Viking Therapeutics
Zealand
AstraZeneca

These are not using GLP 1

Bur

Using another GUT hormone Amylin

(More Amylin and less GLP 1)

These pills once introduced will offer the benefits of access and affordability.

The other modalities of management of obesity are of paramount importance

Lifestyle changes

Diet healthy food

Exercise

Herbal medicines

Surgery

Metabolic or Bariatric Surgery

Laparoscopic Gastric banding

Gastric bypass

Sleeve gastrectomy

Duodenal switch

Obesity can lead to

Or is a risk factors in

Diabetes

Hypertension

Cardiovascular diseases

Strokes

Arthritis

Sleep apnea

Cancers

Gall stones

Fibrosis

PwO

People with Obesity

Chronic disease

Long term solutions
Sustainable. Long term

Beyond lifestyle adjustments
Behavioural intervention
Integration

This is a challenging problem
Health care
Public policy
Awareness

Issues are complex and challenging
Socio economic
Cultural
Psychological issues

Recently
There is a case Reported of a UK Nurses death linked to weight loss jab
allegedly
In the death certificate
Cause of death is given
Multiple Organ failure
Septic shock and Pancreatitis as the immediate cause of death
And
Use of Tirzepatide as a contributing factor
This is the only case Reported in a 58 y old female UK nurse
Needs further investigation, further research.

Dr. R.G. Wiseman Pinto.
Goa