**Introduction**

Study background

Knee osteoarthirities ( OA ) affects mostly older adults and its primary risk factor is obesity. This study sought to understand weight control stratigies, facilitators and barriers toward weight control in older adults with knee OA

Knee OA is a major cause of joint pain and problems in daily functioning. These patients of knee pain and physical functioning have been predicted to deteriorate based on their knee characteristics, clinical factors and physiological factors. Among these factors, obesity is the primary risk factor of knee OA

People clinically defined as obese (body mass index [ BMI ]> 30 kg/m2) were four times more likely to have knee OA than those with BMI in a desirable range (≤25kg/m2).

The degree of obesity in early life was also associated with the risk of developing knee OA later in life.

Overweight or obese adults with knee OA who participated in behavioral weight loss interventions in a systemic review and meta-analysis of randomized controlled trials showed moderate improvements in pain and physical functions

In other words, disability improved significantly when weight loss was >5.1% or a reduction rate of 0.24% per week.

All obese people with OA≥ 45 years old,with activity related joint are recommended to receive weight- loss treatment. Overweight obesity are well known to increase the risk of KOA by mechanical load on weight bearing joints.

Recent study showed that waist circumference could be one of the main risk factor for limiting ambulation speed in adults with KOA.

Need of study:

1. Weight loss is advocated as the treatment of choice for obese knee OA patients ,as it yields clinically significant reduction in pain and improvements in function.
2. Obesity is strongly linked to knee OA and is considered a risk factor for both incidence and progression.

3.obesity is caused

Research question and proposed hypothesis

Do the knee osteoarthritis obese patient got benefited of participation in a structured weight reduction program ??

Null hypothesis

Knee osteoarthritis obese patients attending weight reduction program have equal chances to lose their weight comparing to non attending knee osteoarthritis obese patients.

Alternate hypothesis

Knee osteoarthritis obese patients attending weight reduction program have more chances to lose their weight comparing to non attending knee osteoarthritis obese patients.

Plan of study

Aim

Objectives

Type of study

Definition and selection of cases

Diagnostic criteria for osteoarthritis

Diagnosis

Source of cases

Eligibility criteria

Exclusion criteria

Components of study and its execution plan

Outcome assessment parameter

Data assembly and analysis

Translational relevance of the study

Approvals from the authorities

Ethical issues related to study