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## **AWARENESS ON OUTCOMES AND RISK BENEFITS OF MANAGEMENT OF DIABETIS IN TERTIARY CARE HOSPITAL**

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### **ABSTRACT**

Diabetes mellitus (DM) is a chronic metabolic disorder characterized by persistent hyperglycaemia. It may be due to impaired insulin secretion, resistance to peripheral actions of insulin, or both. Type 2 diabetes is a chronic disease it is characterized by the high blood sugar levels Type 2 diabetes mellitus (T2DM) accounts for >90% of the cases of diabetes in adults. Resistance to insulin action is the major cause that leads to chronic hyperglycaemia in diabetic patients. It can cause damage to various organ systems, leading to the development of disabling and life-threatening health complications. This article research focuses on the pathophysiology of DM and highlights the role of the inter professional team in its management and also on the lifestyle modifications that are warranted for the successful management of T2DM. The employability of drugs and their potential use as effective therapeutic activity to first line hypoglycaemics are also discussed.

**Keywords: Risk, Benefits, Diabetes Outcomes, HbA1c**

## INTRODUCTION:

Diabetes is an autoimmune disorder developed in childhood or in early adulthood. The incidence of type1 is increasing around 3% every year worldwide. More than half millions of children suffering from type1 diabetes worldwide [1-5]. Type2 diabetes is more common than type1 90% of type2 diabetic patients worldwide. The highest incidence of type1 diabetes is 22-35% and the prevalence of type1 is increasing for last 100 years. Mature onset diabetes of youth (MODY) which can be done to one of six genetic defects [6-8]. 1-2% Of total cases of diabetes. According to International Diabetes Federation (IDF) nearly 463 million of people are suffering from diabetes in the year 2019. In 2017 year 425 million diabetes cases are present. In the year 2012 the 1.5 million of death occurred due to diabetes and this was given by World Health Organization (WHO) [9-11]. More than 62 million of Indians are affected by diabetes nearly 7.2% of adults with diabetes and 6.7% people are affected from pre-diabetes. In the year 2014 more than 24 million people of United States are affected from diabetes and 7 million people are un-diagnosed. In the year 2012 47 million people are affected from pre-diabetes. 7, 00,000 of Australians are affected from diabetes. Type 2 diabetes widely found in low socio-economic countries [12-14]. In Japan 80% Of diabetic cases were found

more in children and adolescents. Patients with type2 have a high risk of developing Hypertension 75-90% lipid disorders of 70-80% and obesity of 55-70% [15-17]. When diabetes was diagnosed at the age of 45 years men lose 5.8 years of age and women lose 6.8 years of age. 10.3 million Cases of diabetes diagnosed in America and 0.5-1 million of type 1 diabetic patients and 5.4 million patients are un diagnosed [18]. GDM complicates the 7% of all pregnancies in United sates 30-55% of women will develop the type2 diabetes or glucose intolerance after the pregnancy.

**AIM:** To determine the outcomes and management of type-2 diabetes in tertiary care hospital at Khammam.

## OBJECTIVES OF STUDY:

The main objective of study is to estimate the outcome measures observed in patients with type-2 Diabetes. To reduce the risk of progression and development of complications. To enhance the life of diabetic patients. To create the awareness in patient by conducting patient counselling.

## NEED FOR STUDY

We should counsel the patients and improve their quality of life. To manage the outcomes observed in diabetic patient. So, by controlling and maintaining the blood glucose level we can decrease the risk and further progression of these complications. To reduce the risk of the diabetes in patient.

To improve the patient quality of life by creating awareness. To reduce the hospitalization of patients.

## METHODOLOGY

### STUDY DESIGN:

Source of data is patient profile and case sheet data in which conducting the study at the site of Mamatha general hospital within a duration of nine months by conducting a design a methodology of cross-sectional survey taking the sample size minimum of 200.

### ETHICAL CONSIDERATION:

The study protocol prepared and submitted to the IEC. The study protocol was approved by IEC.

**SAMPLE SIZE:** Taking the sample size of minimum 200(n=200).

### DATA COLLECTION:

All necessary details were collected from patient medical records. The medical records which were collected reviewed on daily basis then the data will be tabulated based on specific study design. The specific parameters like FBS, RBS, PLBS, HbA1C, BU, and Serum creatinine, HDL, LDL and BMI etc. for estimation of micro vascular complications of DM were collected and recorded.

### INCLUSION CRITERIA:

Patients of both genders. In patients prescribed with at least one oral anti diabetic agent or insulin. Patients who are diagnosed with type2 DM. Patient who received anti

diabetic therapy for at least for 3 months. The patients having 10 years of past diabetic history. Include the patients who are having HbA1c level >6.5.

### EXCLUSION CRITERIA:

Lactating & nursing mothers. Pregnant women. Patient treated on outpatient basis. Patient under critical condition and requiring critical care. Patient who received non-pharmacological therapy. Genetically determined diseases. Mental illness of patient.

### RESULTS:

All subjects satisfy the inclusion and exclusion criteria were included as the study population. Total 205 inpatient subjects prescribed with oral hypoglycaemic and anti-hypertensive were included in the study

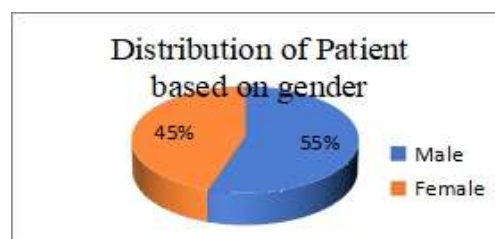
### GENDER CATEGORIZATION:

Subjects were categorized according to gender and out of 205 patients A 205 consecutive patients are taken in this study 110 were males and 55% and 90 were females and 45% as shown in **Table 1**,

**Figure 1** below.

**Table 1**

| GENDER | NO. OF SUBJECTS | PERCENTAGE% |
|--------|-----------------|-------------|
| MALE   | 110             | 55          |
| FEMALE | 90              | 45          |
| TOTAL  | 200             | 100         |



**Figure 1**

## AGE GROUP CATEGORIZATION

In this study most of the people affected in the 51-60 age range 89 subjects were more prone to type-2 diabetes mellitus & hypertension.

Table 2

| AGE   | NO. OF SUBJECTS | PERCENTAGE% |
|-------|-----------------|-------------|
| 21-30 | 15              | 7.25%       |
| 31-40 | 34              | 18%         |
| 41-50 | 40              | 20%         |
| 51-60 | 85              | 42.5%       |
| 61-70 | 33              | 16.5%       |
| 71-80 | 06              | 3%          |
| TOTAL | 200             | 100%        |

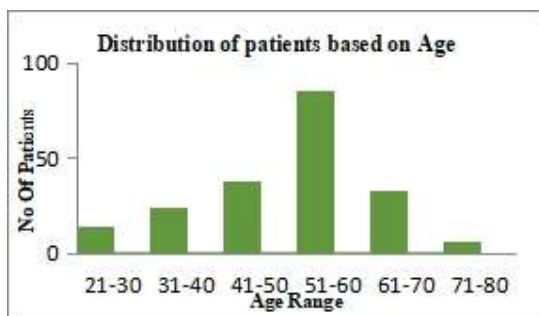


Figure 2

## BODY MASS INDEX

Based on BMI the subjects are divided into three categories. In this study 20% study subject has Under BMI [10-19kg/m<sup>2</sup>], 36% subjects were Normal BMI [20-24.5kg/m<sup>2</sup>] and 30.5% subjects were Over BMI [25-29.9kg/m<sup>2</sup>] and 13.5% subjects were obese[>30kg/m<sup>2</sup>].

Table 3

| BMI RANGE            | NO. OF SUBJECTS | PERCENTAGE |
|----------------------|-----------------|------------|
| UNDER BMI (10-19)    | 50              | 24%        |
| Normal BMI (18.5-24) | 50              | 26%        |
| Over weight          | 60              | 29.5%      |
| obese                | 30              | 20.5%      |
| Total                | 200             | 100%       |

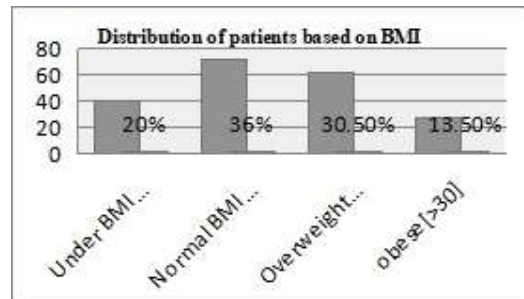


Figure 3

## BASED ON HbA1C LEVEL:

On the basis of HbA1C levels the subjects are categorized into three major groups. In first group with range 7-8% HbA1c & Second group with HbA1C 8-9% and third group with the range above 9%. According to our result group one subject in the having 100[50%] and group two subjects having 80[40%] and group three subjects have 20[10%].

Table 4

| HbA1c | No. of patients | percentage |
|-------|-----------------|------------|
| 7-8   | 100             | 50%        |
| 8-9   | 70              | 30%        |
| >9    | 30              | 20%        |
| TOTAL | 200             | 100%       |

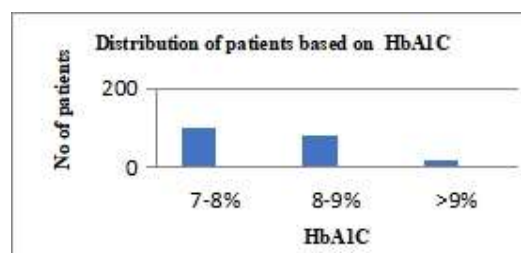


Figure 4

## CONCLUSION

Type2 diabetes is a chronic disease it is characterized by the high blood sugar levels it is also called as Adult or Maturity onset diabetes mellites main objective of this research is about what are the outcomes after taking treatment with medication and improving patients awareness by collecting

particular following data according to criteria through the patient's counselling awareness and management awareness of medication and counselling with that we are successfully monitors the risk benefit ratio of disease and outcomes.

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