

## INTRODUCTION

- Coronavirus disease 2019 (COVID-19) infection is confirmed to worsen type 2 diabetes (DM2) control by significantly increasing HbA1c.
- Impact of recovery from acute COVID 19 on HbA1c is not clear to the medical society.

## OBJECTIVE

- To determine impact of recovery of acute COVID 19 on HbA1c post discharge in outpatient follow up.

## HYPOTHESIS

- People with DM2 with high A1C during acute COVID requiring high doses of insulin, may have decreased insulin requirement with adequate glycemic control after recovery from acute COVID.

## METHODS

### Patient selection:

- A retrospective chart review
- Patients with Type 2 Diabetes Mellitus and Acute COVID 19 infection during March 2020- June 2020.
- HbA1C levels were checked every 3 months during follow up visits at our outpatient Adult Health Clinic after being discharged from our hospital until one year
- A total of 17 charts were analyzed.

## CONCLUSIONS

- Our study has demonstrated the significant and rapid decrease of Hba1c ,as well as insulin requirement after recovery from COVID infections.

## RESULTS

- The paired T-test for A1C between hospitalization and the first follow-up visit is performed.
- The Mean of HbA1C before discharge and the first follow-up visit are 11.95 and 7.79
- The mean difference ( decrease)in A1C is 4.17. (  $p < 0.01$ )
- Out of 14 patients who required insulin on discharge, 8 patients were discontinued of insulin within the first year since COVID-19.
- Out of the 8 patients discontinued off insulin, 50% of them were off in first month of discharge, 25% were off in 3 months , 13% were off in 9 months and 12 months follow up.

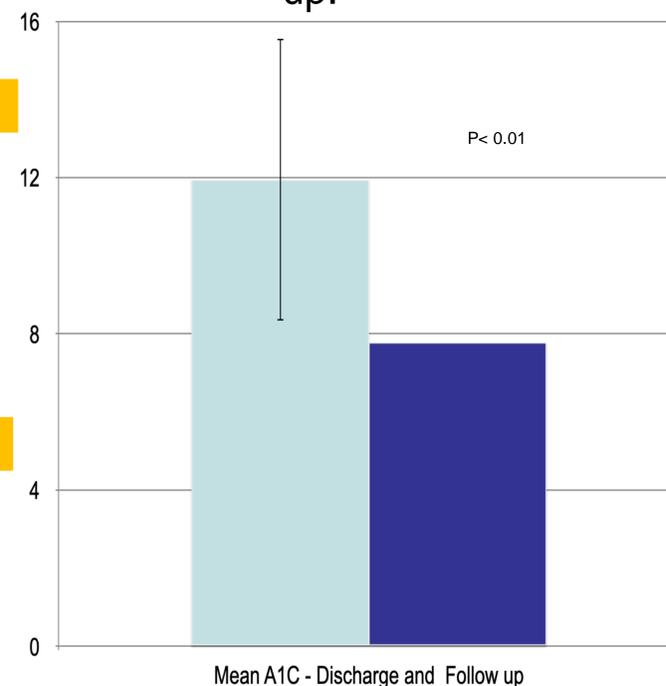


Fig 1. showing the mean difference in A1C discharge and follow up ( $p < 0.01$ )

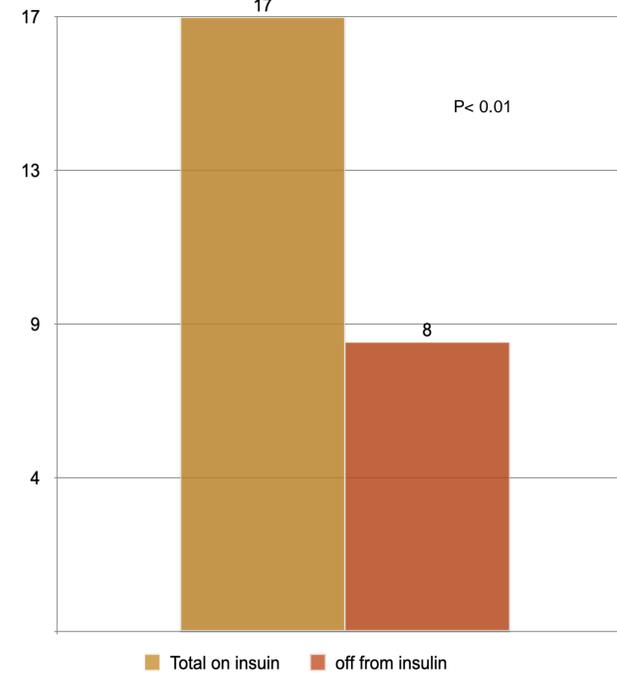


Fig 2 showing the insulin discontinuation on follow up ( $p < 0.01$ )

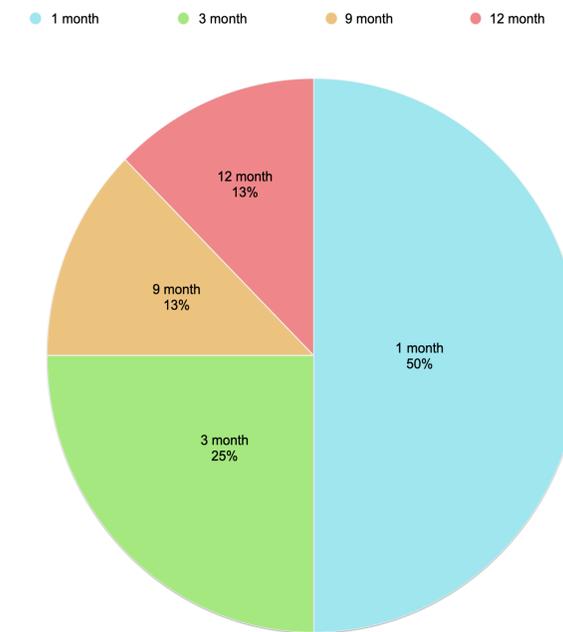


Fig 3 showing month wise insulin discontinuation on follow up ( $p < 0.01$ )

## RECOMMENDATIONS

- To follow up with those COVID19 patients discharged with insulin more frequently ,every 2-4 weeks to check the logs and promptly adjust insulin dose and other antihyperglycemic medications to prevent life-threatening hypoglycemic events.
- To continue future research in this topic to completely understand the course of recovery and long term impact of COVID19 on DM2.

## REFERENCES

1. Chen J, Wu C et al. The Impact of COVID-19 on Blood Glucose: A Systematic Review and Meta-Analysis. Front Endocrinol (Lausanne). 2020 Oct 5;11:574541
2. Logette E et al A Machine-Generated View of the Role of Blood Glucose Levels in the Severity of COVID-19. Front. Public Health