

# **Clinical characteristics, insulin use and diabetes control during postacute care and follow-up of diabetic COVID-19 patients hospitalized in DMCH**

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## Background and Objective :

- Diabetes mellitus is a risk factor for the poor outcome of patients with COVID 19 (Corona virus disease 2019)
- Negative impact of COVID 19 also is being observed on the glycemic status of the patients
- Aimed to explore the post-COVID glycemic status of diabetic patients admitted in a tertiary care hospital

## Methods:

- This longitudinal study was conducted on 161 diabetic patients during their post-acute care following the hospitalization due to COVID-19 in Dhaka Medical College Hospital.
- Enrollment were done according to inclusion and exclusion criteria and following the informed written consent.
- A semi-structured questionnaire was used for data collection. Data were collected by history taking, relevant laboratory investigations, and reviewing hospital records.
- Collected data were analyzed by using the statistical software SPSS 26.

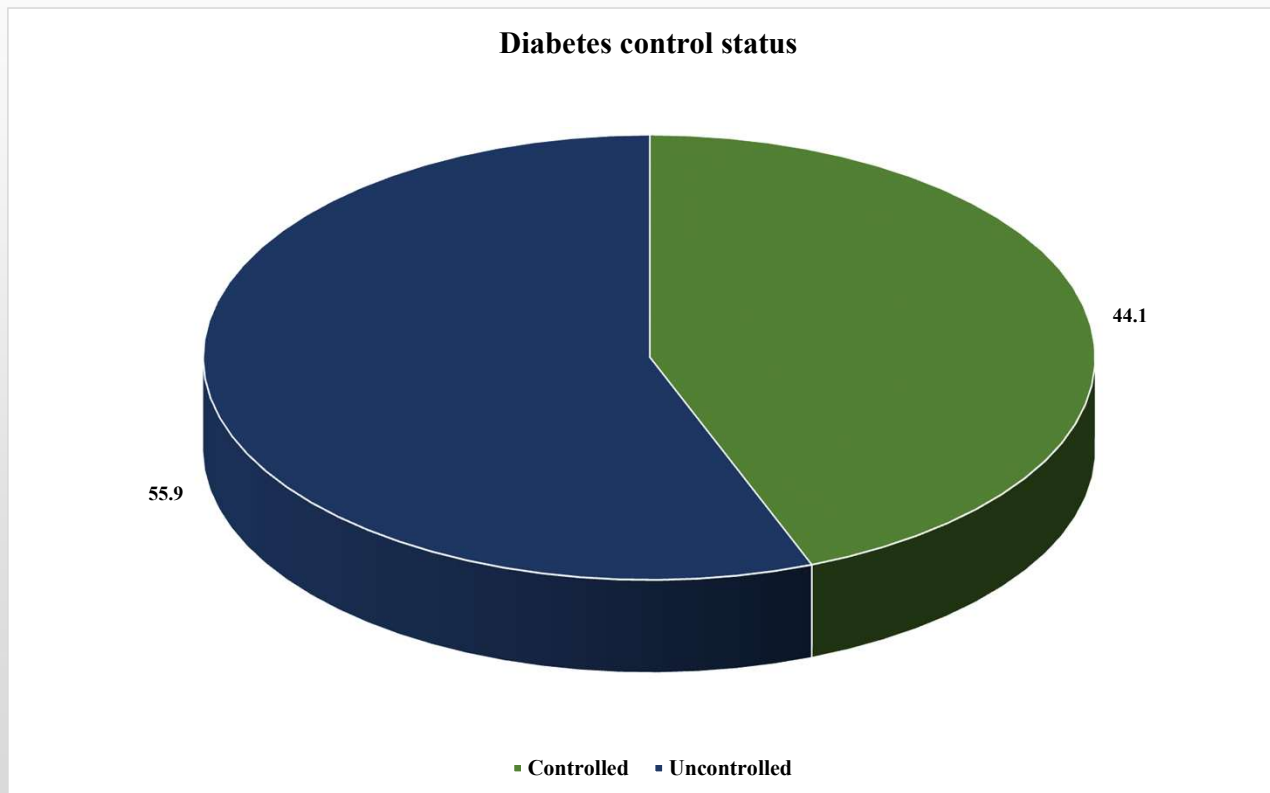
# Result

- The mean age of the patients was  $54.67 \pm 10.78$  (SD) years
- Male preponderance was observed with 57.1% male and 42.9% female
- Fatigue (76.6%), weight loss (54.7%), and weakness (44.7%) were the most common clinical symptoms
- HbA1C ( $7.65 \pm 2.22\%$  Vs  $8.07 \pm 1.92\%$ ) was significantly increased during post-acute care comparing baseline levels during hospital admission
- The frequency of the patients with controlled diabetes was also significantly reduced during post-acute care (84 Vs 71)

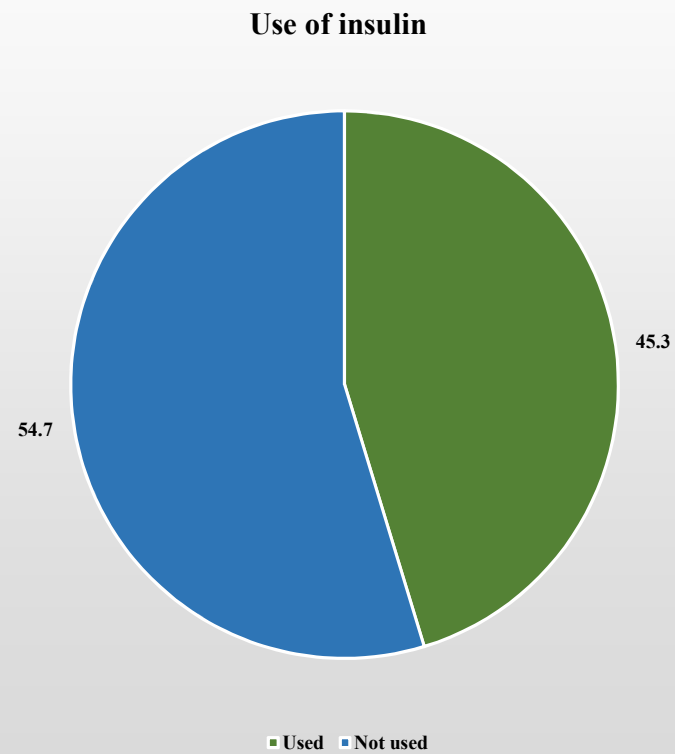
**Table : Comparison of glycemic status of the study participants between index admission (due to COVID-19 disease) and follow-up (n=161)**

	Index admission	Post-acute care/follow-up	p value
<b>HbA1C (%)</b> ‡	7.65±2.22	8.07±1.92	.026*
<b>Random blood sugar (mmol/l)</b> ‡	8.68±2.14	9.67±2.82	<.001*
<b>Diabetes control</b> ‡‡			
Yes	84	71	<.001**
No	77	90	
<b>Requirement of insulin</b> ‡‡			
Yes	64	73	.108**
No	97	88	

# Figure : Diabetes control status among the study patients (n=161)



**Figure 2: Insulin use among the study patients (n=161)**



# Discussion

- This present study observed a **significant worsening of glycemic control among diabetic patients during post-acute care after three three months** following COVID-19 comparing to the glycemic status during the hospitalization.
- **HbA1c increased significantly** compared with the baseline value of index admission. Approximately 84 patients had good glycemic control during the index admission.



# Discussion

- During post-acute care after three months 71 patients had good glycemic control
- So, **glycemic status of the diabetic patients statistically deteriorated** in this study following COVID-19 disease
- **The number of patients requiring insulin also increased from 64 to 73** post-acute care

# Conclusion

- This study observed increased HbA1C among diabetic patients following COVID 19 disease
- The frequency of the patients with **controlled diabetes was also significantly reduced** during post-acute care
- **The number of patients requiring insulin also increased**
- So, **diabetes should be monitored and controlled more carefully during the post covid period** to reduce the complication of diabetes mellitus

**Thank you**