The Relationship Between Glycemic Characteristics and Clinical Outcome in a Sample of Diabetic Egyptian Patients Infected With Covid-19

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Abstract

Background:

The high prevalence of diabetes globally makes it a frequent comorbidity in patients with coronavirus-associated disease 2019 (COVID-19. As diabetes increases the susceptibility to different kinds of respiratory infections, is often identified as an independent risk factor for developing lower respiratory tract infections
Aim of work: The aim of the study was to describe the glycemic characteristics and clinical outcomes in a sample of Egyptian COVID- 19 patients with type 2 diabetes.

Patients and Methods:

A case control study was performed on 160 patients vs 26.90 ± 3.15 kg/m2, p<0.01, and also higher levels of inflammatory markers; median CRP was median D dimer was (0.91 mg/mlvs 0.65 mg/l , p<0.01), and mean Ferritin was (469.78 ng/ml vs COVID-19 patients with diabetes were more prone to develop severe pneumonia than non-diabetic patients (18.8% vs 3.8%), hypoxia (mean oxygen susceptible for ICU admission than non-diabetic COVID-19 patients (15% vs 3.8%, P <0.01). infected Conclusion: Patients with T2DM diagnosed with COVID-19 are at increased risk of morbidity, hospitalization, and ICU admission, then non-diabetic covid-19 patients. In addition to 12 mg/l, p<0.01),

in Kafr El sheikh chest hospital from April 2021 to December 2021. They were divided to 2 groups: - Group I: 80 diabetic patients with covid-19 and Group II:80 non-diabetic patients with covid-19. All candidates were subjects to full history, laboratory investigations (Fasting blood glucose, 2hrs post prandial, HbA1c, RT- PCR, CRP, D-dimer, ferritin cholesterol, Urea, creatinine, SGOT, SGPT, Oxygen saturation) and Evaluation of the clinical outcome of the patient after COVID-19 infection whether recovery after home isolation and treatment, hospitalization in isolation hospitals, or ICU admission.

Results:

Diabetic COVID-19 patients had significantly higher BMI than non diabetic covid 19 patients (Mean ± SD: 29.37 ± 2.53 kg/m2

(18 mg/l vs12 mg/l, p<0.01),
351.76 ± 131.22 ng/ml, p<0.01).

saturation :89.30 ± 8.14% vs 94.76 ± 4.97%, p<0.01) and hospitalization (36.2% vs 16.2%). They were more also with covid 19 were presented with Diabetic

ketoacidosis.and lastly 13.8% of diabetic patients Chest CT findings severity, Serum ferritin, CRP and D.dimer are highly sensitive predictors of need for ICU admission.

Keywords:
DM, COVID-19, clinical outcome.