

## Covid-19 and T2 Diabetes Mellitus (T2DM): a Dangerous Association

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**Background and Aims:** During November 2020 through february 2021 we evaluated how the therapies used in treating Covid-19 patients affected blood glucose control in those with both COVID-19 and T2DM.

**Materials and Methods:** We evaluated 432 inpatients affected with Covid-19 pneumonia and T2DM. 337 were male (78%) and 95 female (22%) with age  $70 \pm 5$  yrs and a HbA1c  $9 \pm 0.7\%$ . Their at home diabetic therapy, along with antibiotic and steroid therapy was always switched to a basal bolus insulin regimen.

**Results:** The T2DM and Covid-19 in-patients had a BMI  $28 \pm 3$  kg/sm and an average of total insulin daily dosage (TDD) at hospitalization of  $54 \pm 7$  IU/day and at discharge of  $77 \pm 8$  IU/day.

At hospitalization we performed an i.v insulin infusion protocol to achieve normal blood glucose values that lasted 48 hrs in 195 pts (45%). The switch to basal bolus insulin therapy was made on the 3rd day of hospitalization. The major amount of insulin was administered before lunch and supper (both covering 40% of TDD) with 20% of TDD at night as basal. The major cause of this increase (40%) of TDD is in part due to the inflammatory state and partly to steroid therapy. We didn't detect any hypoglycemia.

**Conclusions:** We used an enormous amount of insulin, both iv and on basal bolus regimen to achieve a slightly sufficient blood glucose control. Further evaluation in the use of other antihyperglycemic drugs combined to insulin regimen seems appropriate and necessary.