ÇANKIRI KARATEKİN UNIVERSTY
SCIENCE INSTITUTE

STUDENT NAME SURNAME   : ABDULKHALEQ SAAD MNATI ALSHIHMANI

ADVISOR   : Prof. Dr. VOLKAN EYÜPOĞLU..

DEPARTMENT   **:** Co-Advisor. Assistant professor Dr. Fawzi Hassan Zayr Al-Fahdawi

PhD in Clinical Biochemistry

1. **THESIS NAME:** Estimation of serum procalcitonin , ferritin , d-dimer and other parameter in patient with covid-19.

2. **KEY WORDS:** procalcitonin (PCT), ferritin, d-dimer, and covid-19.

3. Abstract

The present study has intended to discover the role of procalcitonin as a biomarker for coronavirus infectious disease 2019 (COVID-19) infection, and to predict its activity in differentiating the severity of the COVID-19 disease by taking mild, severe, and critical conditions of the COVID-19 patients. Eighty patients with COVID-19 were included in the study, which were on different clinical grades of the disease (mild, severe, and critical). Additionally, the study was controlled with 55 healthy people. The results have shown significant increase in the procalcitonin level in COVID-19 patients compared to the control. Moreover, significant increase of procalcitonin level was observed from mild passing by moderate to the critical cases of COVID-19 patients. Also, ferritin, D. dimer, and creatinine levels were significantly higher in COVID-19 patients compared to control. Nevertheless, the level of urea was not changed significantly in COVID-19 patients compared to control. In conclusion, procalcitonin can be used as excellent biomarker in the prognosis of COVID-19 with good percentages of sensitivity and specificity.

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