



# Utility of D-Dimer in Pulmonary Thromboembolism in Postcovid Patients-A case control study

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• Background : Infection caused by SARS-COV-2 has been shown to lead to significant procoagulant events. Some cases develop life-threatening pulmonary thromboembolism(PTE).D-dimer is the important indicator in diagnosis of PTE in diagnosis of post covid patients. D-dimer may serve as the diagnostic marker for PTE in resource poor settings for timely and appropriate treatment.

COVID-19 and post-COVID-19 patients in order to confirm/dismiss the diagnosis PTE.

• Keywords: D-dimer,pulmonary thromboembolism,COVID-19,CTPA.

• Materials&methods: We conducted a single –center case control study at NRI medical college. This study was conducted between may2022tomarch2021. It included50consecutively hospitalizedpatients with recent pneumonia caused by covid-19and clinical presentation referring to PTE. The casecontrol was divided into two groups-with and without a definitive diagnosis ofPTE, proven by CT pulmonaryangiography(CTPA).The D-dimer values of all the patients were taken and cut-off value of D-dimer was calculated byROCanalysis.

• Results: Out of 50cases, 23patients had PTE and 27had no evidence of PTE. The mean( $\pm$ SD)age of the group was 65.63( $\pm$ 11.40) years. Around 60% patients were female(Men:Female ratio is 1:1.12). The cut-off value of D-dimer was1763(570-8000 )ng/ml with Sensitivity(Se) of 87.5% , Specificity(Sp) of72.9%, Positive predictive value(PPV) of62.7% Negative predictive value(NPV)of91.7%, p value( $p = 0.027$ ).

• Conclusion: This study shows that D-dimer is a surrogate marker in the diagnosis of PTEin poor resource settings where there is no facility forCTPA. ECGand Echocardiography criteria remain predictive ofPTE. We suggest that a higherD-dimer cut-offvalue should be applied in

