

Can laboratory findings predict pulmonary involvement in children with COVID-19 infection?

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Objective : Studies investigating clinical and imaging findings of coronavirus disease 2019 (COVID-19) pneumonia and predictors for lung injury mostly focus on adults. In this study, we aimed to evaluate the role of laboratory findings in predicting lung involvement in children with COVID-19.

Methods : Children with COVID-19 confirmed by reverse-transcription polymerase chain reaction or COVID-19 IgM and who underwent chest computed tomography (CT) scans were reviewed retrospectively. Admission absolute neutrophil count (ANC), absolute lymphocyte count (ALC), ANC/ALC ratio, platelet count, D-dimer, fibrinogen, ferritin, procalcitonin, C-reactive protein (CRP), and lactate dehydrogenase levels were compared in patients with normal and abnormal CT scans.

ACADEMIC P.E.A.R.L.S

Pediatric Evidence And Research Learning Snippet



FIBRINOGEN and COVID in kids – what's the connection ?

Results: A total of 101 children were included. Among the patients, 68 (67.3%) had normal CT scans, and 33 (32.7%) had pulmonary involvement. **The median CRP, ferritin, and fibrinogen levels were significantly higher in children with abnormal CT findings.** The model of binary logistic regression based on the presence of cough, shortness of breath, fibrinogen, ferritin, and CRP levels showed that the possibility of having abnormal CT was 1.021 times more likely for every one unit increase in fibrinogen levels.

Conclusion: Fibrinogen might be useful to predict pulmonary involvement of COVID-19 in children. Restricting radiological imaging to patients with significant symptoms and high fibrinogen levels might be helpful in children with COVID-19 infections.

Key message: Fibrinogen stands as a promising clinical marker for COVID infection in children.

EXPERT COMMENT

“Fibrinogen trends seems to be a promising marker, which appears to correlate with lung involvement in children with COVID infection.”

DR ILIN KINIMI

Consultant ,Pediatric Pulmonologist

Fellowship in Pediatric Pulmonology & Sleep Medicine (Singapore)

ERS Diplomate in Pediatric Respiratory Medicine

Manipal Hospitals,Bangalore

With warm regards,

**DR MANINDER S
DHALIWAL**

DR. PIYUSH GUPTA
IAP NATIONAL
PRESIDENT 2021

DR REMESH KUMAR R.
IAP PRESIDENT
2022

**DR BAKUL JAYANT
PAREKH**
IAP PRESIDENT
2020

**DR G.V.
BASAVARAJA**
HON. SECRETARY
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Reference

Yılmaz Çelebi M, Akaslan Kara A, Arıkan KÖ, Bayram N, Devrim İ. Can laboratory findings predict pulmonary involvement in children with COVID-19 infection? *Pediatr Pulmonol.* 2021 Aug;56(8):2489-2494. doi: 10.1002/ppul.25452.