

International Conference on VACCINE RESEARCH

February 07, 2022 | Webinar

Post-ARDS pulmonary manifestations in COVID-19 patients: Assessment of risk factors and treatment approaches

Alizamin Sadigov

Medical University of Azerbaijan, Baku, Azerbaijan

Background: Mixed radiological pulmonary manifestations with persistent and even progressive dyspnea are the possible consequences of COVID-19 and ARDS and the most worrying long-term complications. Such patients are at high risk for pulmonary fibrosis and non-reversible lung dysfunction. The aim of our study was the assessment of risk factors and possible approaches to the treatment of residual complications in COVID-19 patients complicated with ARDS.

Methods: Our study was randomized and controlled and ninety seven patients were assessed at pulmonary and critical care departments of University Hospital, Baku city, 6 weeks after discharge from COVID-19 hospitals. While being in hospitals all patients have been admitted to the ICU related to severe COVID-19 infection and acute respiratory distress syndrome(ARDS).At the time admission to the our university hospital in all patients had persistent , non-improving symptoms, particularly dyspnea. Depending on extensity of residual fibrotic and non-fibrotic changes in lungs all patients randomized in two groups:1)39 patients with lung involvement (50-75%);2)58 patients with lung involvement more than 75%.

Results: At 6 weeks after discharge all patients reported persistent symptoms: dyspnea 100.0%(97/97), cough 42.3%(41/97),chest pain 51.5%(50/97),fever 29.0%(28/97) and hemoptysis 18.5% (18/97) were assessed. Pulmonary abnormalities were found in all subjects; however, most extensive abnormalities were seen in patients with history of intubation related to ARDS(OR 3.75[0.91-8.44]95%CI;p<0.001).In all patients persistent lung function impairment were evaluated. Severity of lung function deficiency was depending on severity of ARDS(p<0.001).Follow-up chest CT was done following negative PCR result after 6 weeks to assess degree of recovery and residual fibrotic and non-fibrotic changes. Pulmonary fibrosis has been seen in all patients with lung involvement more than 75%(OR 2.45[0.81-6.29](% CI; p<0.001),and organizing pneumonia although seen commonly in patients with extensive lung involvement(OR 4.24[0.94-9.26] 95% CI; p<0.001).Traction bronchiectasis was higher in patients with extensive lung involvement compared to non-extensive (OR 2.11[0.72-5.01]95% CI; p<0.004). Lack of use of Dexamethasone in acute phase of the disease was higher in patients with lung involvement more than 75%(p<0.004) and lack of use prone position ventilation also was one of risk factors for extensive lung involvement(p<0.01).Invasive mechanical ventilation incidence was higher in extensive lung involvement (OR 2.84[0.76-6.44]95%CI;p<0.002).

Conclusions: Following post-ARDS in severe COVID-19 infection the patients have significant residual radiological inflammatory lung disease, persistent ventilator and functional deficit. There were several risk factors associated with more severe lung fibrotic and non-fibrotic residual changes. Treatment with corticosteroids at the time of ICU admission associated with decreased of extensity of radiological changes and functional impairment

Biography

Alizamin Sadigov is from Therapeutic educational Clinic, He has graduated Doctorate in Atlantic International University in 2015 (Hawaii Islands, USA) and Head of Pulmonary medicine department at Azerbaijan Medical University and Dozen at Azerbaijan Tibb University and studied Fellow at American Thoracic Society at ATSF.

alizaminsadigov@gmail.com