Welcome!

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COVID 19 ad ILD: lights and shadows

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Introduction

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• COVID-19 infection and ILD: change of perspective

• Pulmonary fibrosis after COVID-19 disease: some suggestions

• COVID-19 disease and ILD: common approaches
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• Pulmonary fibrosis after COVID-19 disease: some suggestions

• COVID-19 disease and ILD: common approaches
• The patient's group in whom SARS-CoV-2 infection is most lethal (men in their seventh decade of life, with comorbidities, smoke exposure), is also highly representative of patients suffering with IPF.
• There are as yet no data reporting the incidence or mortality of SARS-CoV-2 infection in patients with IPF.

• Given that the risk factors for poor outcomes in SARS-CoV-2 infection are common in this patient group, who are further debilitated by reduced pulmonary reserve, it is possible that the prognosis is even worse for patients with IPF than for the general population.

• The prevalence of coronaviruses infection in patients with autoimmune diseases is lacking in previous literature

• Patients with rheumatoid arthritis treated with biological DMARDs or targeted synthetic DMARDs did not seem to be at increased risk of life-threatening complications from SARS-CoV-2 compared with general population

• No cases of complicated SARS-CoV-2 related pneumonia in inflammatory bowel diseases have been observed, even in those patients under immunosuppressive treatment

Clinical features of rheumatic patients infected with COVID-19 in Wuhan, China

• Most rheumatic patients have immune dysregulation and rely on immunosuppressive agents to control disease progression

• Some antirheumatic agents have been proposed to possess beneficial effects in COVID-19

Clinical features of rheumatic patients infected with COVID-19 in Wuhan, China

• Our data suggest that rheumatic patients may present with more severe symptoms when infected with COVID-19, with a higher risk of respiratory failure compared with non-rheumatic group

• There are many common clinical characteristics between COVID-19 and a flare of rheumatic diseases

• This condition may lead to a misinterpretation of rheumatic disease flare and further delay the recognition of COVID-19

Systemic sclerosis and the COVID-19 pandemic: World Scleroderma Foundation preliminary advice for patient management

SSc SARS-CoV-2-infected patients may be at risk for a severe disease course either due to underlying ILD and/or immunosuppression. Answers to the main practical questions have been provided. For example,

► Should the immunosuppressive treatment be withdrawn in SSc patients?
While always balancing the risk/benefit ratio, we believe that patients should continue immunosuppression to avoid SSc relapses.

► What drugs may be suggested in SSc-COVID-19-infected patients?
Antiviral therapy or TCZ may be a rescue treatment in cases where COVID-19 pneumonia is bilateral and severe, due to the high possibility of a rapid evolution to an ARDS.


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When the game changes: Guidance to adjust sarcoidosis management during the COVID-19 pandemic

Sarcoidosis patients may have an increased risk of a poor outcome and death from COVID-19 infection for several reasons:

- Sarcoidosis involves the lung in approximately 90% of patients.
- Immunologic dysfunction and dysregulation play essential roles in the development of the disease.
- African-American race and many comorbidities associated with glucocorticoid (GC) therapies such as hypertension, diabetes, and obesity have been identified as independent risk factors for COVID-19-related death.
- Immunosuppressive medications are the primary agents used for the treatment of sarcoidosis.

There are multiple ways that the COVID-19 pandemic will directly affect patients with fibrotic ILD

- Common risk factors for poor outcome
- Restricted access to key components of the diagnostic process
- New uncertainties in the use of common ILD pharmacotherapies
- Limited ability to monitor both disease severity and the presence of medication adverse effects
- Significantly curtailed research activities

COVID-19 infection in patients with ILD

- This association may show specific problem for antifibrotic and immunosuppressive therapy
- Patients should be encouraged to continue non-pharmacological therapies such as exercise
- Patients should also be encouraged to maintain social support through virtual means
- Management at home with nurse specialists should be implemented

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COVID-19 infection

• To date, COVID-19 seems to have a lower mortality compared to the most important other human coronavirus syndromes (SARS-1 and MERS), but a dramatically greater spread

• This diffusion is favoured by infective carriers in which the virus produces no or mild flu-like syndrome during the whole duration of the disease after an incubation time (of 1–14 days)

• However, moderate-to-severe COVID-19 patients are very numerous and raise management concerns due to the saturation of Intensive Care Unit (ICU)

Pulmonary fibrosis secondary to Coronavirus infection

- A 15-year follow-up study of 71 patients with SARS showed that interstitial abnormalities and functional decline recovered over the first 2 years following infection and then remained stable.
- At 15 years, 4.6% of the lungs showed interstitial abnormality in patients who had been infected with SARS.
- Long term follow-up of patients who recovered from MERS has not been reported.

Pulmonary fibrosis secondary to ARDS and COVID-19

- Follow-up studies have shown that persistent radiographic abnormalities after ARDS are of little clinical relevance and have become less common in the era of protective lung ventilation.

- About 40% of patients with COVID-19 develop ARDS, and 20% of ARDS cases are severe.

- The long-term pulmonary consequences of COVID-19 remain speculative and should not be assumed without appropriate prospective study.


Pulmonary fibrosis secondary to COVID-19

• The prevalence of post-COVID-19 fibrosis will become apparent in time, but early analysis from patients with COVID-19 on discharge from hospital suggests a high rate of fibrotic lung function abnormalities.

• 47% of patients had impaired DLCO and 25% had reduced TLC. This was much worse in patients with severe disease.

Early CT features and temporal lung changes in COVID-19 pneumonia in Wuhan, China

Long-term follow-up is required to determine whether the reticulation represents irreversible fibrosis.

Analysis of thin-section CT in patients with coronavirus disease (COVID-19) after hospital discharge

- Pulmonary fibrosis may develop early in patients with COVID-19 after hospital discharge (39% of patients).
- Older patients with severe illness during treatment were more prone to develop fibrosis.
- Imaging findings in COVID-19 pneumonia seem to be milder than SARS.

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Covid-19 disease and IPF: common aspects

- No cure; optimal management of complications and comorbidities
- Optimal treatment of end-of-life; symptoms management and relief (breathlessness, cough, fever, anxiety, etc.)
- Psychological support (also for families of patients)
- Role of rehabilitation programs
- There is a role for antifibrotic therapy?

Conclusion

• As the wave of viral infection recedes, other problems will emerge that will need to be addressed

• Given the scale of the COVID-19 pandemic and the number of people requiring invasive ventilation worldwide, post-COVID-19 fibrosis is likely to be a substantial problem

• An adjustment of the ILD patient’s immunosuppressive regimen depending on the stability of their disease may be reasonable

• If immunosuppression is reduced, a clear-cut plan to monitor and treat exacerbations of ILDs should be in place