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Mechanisms and consequences of coronavirus disease 2019 associated liver injury: What can we affirm?

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Abstract

Since the first reports of coronavirus disease 2019 (COVID-19) cases in December 2019 in China, numerous papers have been published describing a high frequency of liver injury associated with severe acute respiratory syndrome coronavirus 2 infection, many of them proposing a link between these findings and patient outcomes. Increases in serum aminotransferase levels (ranging from 16% to 62%) and bilirubin levels (ranging from 5% to 21%) have been reported and seem to be more often observed in patients with severe forms of COVID-19. Although absolute changes in these parameters are frequently seen, other variables, such as the ratio above the upper limit of normal (ULN), the onset of liver injury as a complication in severe cases and histopathological findings, reinforce that liver changes are of dubious clinical relevance in the course of this disease. Other factors must also be considered in these analyses, such as the repercussions of hemodynamic changes, the presence of thrombotic events, and, mainly, the possible drug-induced liver injury with the current, yet off-label, treatment. This paper aimed to analyze the currently available data on liver injury in patients with COVID-19.

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In general, COVID-19 is an **acute resolved disease but it can also be deadly**, with a **2% case fatality rate**. Severe disease onset might result in death due to **massive alveolar damage and progressive respiratory failure**.

Cited by: 37

Author: Zhe Xu, Lei Shi, Yijin Wang, Jiyuan Zhan...

Publish Year: 2020

[\[PDF\] COVID-19 and liver disease](#)

<https://onlinelibrary.wiley.com/doi/epdf/10.1111/liv.14470>

COVID-19 **associated liver injury** is defined as any **liver** damage occurring during disease progression and treatment of COVID-19 in patients with or without pre-existing **liver** diseases. Overall, the incidence of elevated serum **liver** biochemistries in hospitalized patients with

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Additionally, the MAS-like picture associated with COVID-19 pneumonia will **trigger expression of**

<https://cn.bing.com/?FORM=Z9FD1> **factor**, both on **endothelial cells and on activated infiltrating macrophages and**

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Author: Rocco Antonio Montone, Giulia Iannac... Publish Year: 2020

2020-7-13 · Myocardial injury could be due to different pathogenic mechanisms (ischaemic or non-ischaemic), and thus have different clinical consequences. 4 In particular, cardiac ischaemia can arise from an imbalance between oxygen supply and demand, a type 2 MI, a situation that can prevail in acute infections, particularly those that affect the lungs ...

<https://www.ecrjournal.com/articles/Myocardial-Microvascular-Injury-Coronavirus-COVID-19> ▼

COVID-19 and SARS-Cov-2 Infection: Pathophysiology ... 翻译此页

Cited by: 1 Author: Hilal Abboud, Fatima Zahra Abboud, Hana...

Publish Year: 2020

Coronavirus disease 2019 (COVID-19) is an infectious disease caused by SARS-Cov-2, resulting in severe acute respiratory syndrome, with high potential of spreading and infecting humans worldwide. Since December 2019, when the virus was identified in humans, the literature on COVID-19 has grown exponentially and extrapulmonary symptoms ...

<https://www.sciencedirect.com/science/article/pii/S1878875020311645>

Neurological involvement of coronavirus disease ... 翻译此页

In December 2019, unexplained cases of pneumonia emerged in Wuhan, China, which were found to be secondary to the novel coronavirus SARS-CoV-2. On March 11, 2020, the WHO declared the Coronavirus Disease 2019 (COVID-2019) outbreak, a pandemic. To clarify the neurological complications of SARS-CoV-2 infection including the potential mechanisms and therapeutic options. We conducted a ...

<https://link.springer.com/article/10.1007/s00415-020-00000-2>



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<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7075271>

Mar 09, 2020 · Also, Xu et al. have reported steatosis and **liver injury** in the **liver** biopsy of a patient with **COVID-19**. In addition to **liver** injuries, some articles have also reported an increased incidence of acute renal **injury** following **COVID-19**, which could be due to the presence of SARS-CoV-2, the inflammation induced by the disease, or a synergistic ...

Cited by: 7

Author: Ali Rismanbaf, Sara Zarei

Publish Year: 2020

[Liver injury in severe COVID-19 infection: current ...](#)

<https://www.tandfonline.com/doi/abs/10.1080/...>

The outbreak of **COVID-19** is a serious health threat worldwide. Different degrees of **liver injury** or **liver** dysfunctions have been reported in patients with **COVID-19** infection. However, currently, it...

[COVID-19: Doctors round up evidence of damage outside the ...](#)

<https://www.medicalnewstoday.com/articles/covid-19...> ▼

Jul 15, 2020 · Doctors on the frontline of the **COVID-19** outbreak in New York City have published the first comprehensive review of the disease's widespread **effects** on organ systems beyond the lungs.

[COVID-19: immunopathogenesis and Immunotherapeutics ...](#)

<https://www.nature.com/articles/s41392-020-00243-2>

Jul 25, 2020 · In this review, **we** discuss the immunopathology of **COVID-19**, its potential **mechanisms**, and clinical implications to aid the development of new therapeutic strategies against **COVID-19**.

[Hepatic consequences of COVID-19 infection. Lapping or ...](#)

<https://www.sciencedirect.com/science/article/pii/S0953620520302284>

Jul 01, 2020 · During new **COVID-19** infections, **liver injury** may be observed. If **liver** involvement appears during **COVID-19** infection, however, attention is required. This is particularly true if patients are older or have a pre-existing history of **liver** diseases. During **COVID-19** infection, the onset of **liver** damage impairs the prognosis, and hospital stay is ...

Cited by: 9

Author: Piero Portincasa, Marcin Krawczyk, Marci...

Publish Year: 2020