

Reviewer #1:

- 1) Proper revision for the manuscript writing is needed to correct some missed things like (N: 06.-1.2mg/dL) missing point decimal of 0.6. under the title of Clinical, Biochemical & Imaging Features.

Answer: Thank you for pointing it out. Correction has been made in the manuscript.

- 2) The role of steroids and anticoagulation used in management of COVID diseases and their relation to the development of PCC and its management can be added in details.

Answer: Thank you for your comment. All patients in our series received methylprednisolone during the acute COVID illness; one of them also received anticoagulation during the same time. However, these medications were stopped at the time of discharge from the hospital. There is no data available in the literature that steroid or anticoagulation can prevent the development of PCC. Role of these medication in the management of PCC is also uncertain. However we are the first group who reported the role of antiplatelets in the management of PCC (**J. Dinesh**, M. Vij, R. Venugopal, S. Manjunath, E. Simon, M. Prem, R. Rajalingam, M. Rela. ILTS 2022 Joint International Congress of ILTS, ELITA & LICAGE, May 4-7, 2022. *Transplantation* 2022; **106**: 1-214). We have cited it in the manuscript. Our finding underpins the theory of microvascular events in the pathogenesis of PCC.

- 3) Liver transplantation indication in case of PCC can be added in details under the title of Liver Transplantation for PCC.

Thank you for your comment. PCC is a new and poorly understood disease entity; therefore, the indications for liver transplantation in this scenario is not established. In our series, one patient was offered liver transplantation in view of progressive cholestasis, failure to improve with medical management and intractable pruritus.

- 4) Regarding COVID-19 vaccination and PCC was there any difference regarding the type of vaccination and the PCC development?

Thank you for your comment. Comparative study by Kulkarani et al showed that six out of seven patients in their series received viral vector vaccine (Covishield), but none of them developed severe PCC as already discussed in our manuscript. There is no other report available in the literature regarding the role of vaccination in preventing PCC in particular.

- 5) Figure legend should be added.

Thank you for your comment. We had already included figure legends at the time of initial submission.

- 6) Systematic review and meta-analysis can be considered to highlight this research point.

Thank you for your comment. This is a minireview article, hence systematic review and meta-analysis do not come in the scope of this manuscript.

Reviewer #2:

- 1) Pathogenesis - How does the theory of direct cholangiocytes injury by the virus sits with the time of onset of more than one month after the acute infection and that the virus was not found in histological samples from these patients? Is this theory established in previous literature?

Answer: Thank you for your comment. Cholangiocyte injury caused by the virus has been described during the acute COVID illness. However, it is unclear whether this contributes to PCC. The delayed injury probably either immunologically mediated but more likely ischemic cholangiopathy due to thrombotic complication. In this article we have included a figure which demonstrates the Corona virus in the liver biopsy of a patient with PCC.

- 2) Pathogenesis - COVID-19 is known to cause many extra-pulmonary manifestations by an inflammatory component. I think this is another possible mechanism for PCC that should be addressed.

Did any previous study address this theory? In this regard the authors should use the following paper: <https://link.springer.com/article/10.1007/s00296-022-05106-3> This paper describes different extra-pulmonary involvement by the virus with a possible inflammatory mechanism. This paper can also be used as an example for extra-pulmonary involvement which is described in the introduction.

Answer: Thank you for your recommendation, we have cited the study suggested by the reviewer in our manuscript.

- 3) Clinical, Biochemical & Imaging Features - The authors describe the results of previously published research. Was a literature review performed? How were studies found? The authors should include a description for their method - search terms, databases, inclusion criteria to be included in their review, etc.

Thank you for your comment. We searched PubMed, Reference Citation Analysis (RCA) and Web of Science using Mesh words such as "post-Covid-19 cholangiopathy", "COVID-19 sclerosing cholangiopathy", "Covid-19 and liver", and

COVID-19 and liver transplantation". The data on pathogenesis, histology, imaging findings, clinical features, management and outcomes were collected. The same has been included in the manuscript.

- 4) The study by Hunyady (citation 37) does not appear in Table 1, what is the reason? Are other studies not included in this table?

Thank you for your comment. The study has been added to the table. We have tried to include all studies which came across to our notice during the literature search.

- 5) I recommend the authors to add the following data to Table 1: highest ventilatory support needed for each patient, vasopressor drugs, other extra-pulmonary manifestations.

Thank you for your comment. The data on above parameters are heterogenous. Moreover, all authors want to keep the article as concise as possible so that readers can go through the manuscript in 10 minutes time (please note that it is a minireview).

- 6) COVID-19 vaccination and PCC - The authors address the possible effect of the vaccines on COVID-19 related cholangiopathy. I think they should emphasize the effect of vaccinations on severe and critical disease - which ultimately leads to lower rates of PCC (that is clearly associated with critical disease and mechanical ventilation).

Many articles have described this relationship and can be used as examples. I recommend the following paper which demonstrated the major effect by the vaccinations among patients with severe COVID-

19: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0268050>

Thank you for your recommendation. We have cited the study suggested by you in the manuscript.