

# Efficacy and Safety of Indomethacin in Covid -19 patients

Rajan Ravichandran<sup>1</sup>, Prasanna Purna<sup>2</sup>, Sivakumar Vijayaraghavalu<sup>2</sup>, Ravi Kalavakollu<sup>2</sup>, Shilpa Gaidhane<sup>3</sup>, and Ramarathnam Krishna Kumar<sup>4</sup>

<sup>1</sup>MIOT International

<sup>2</sup>Narayana Medical College and Hospital

<sup>3</sup>Datta Meghe Institute of Medical Sciences - Wardha Campus

<sup>4</sup>Indian Institute of Technology Madras

January 7, 2021

## Abstract

**Background** Indomethacin, a well-known non-steroidal anti-inflammatory drug (NSAID), with effective broad spectrum anti-viral activity, was evaluated for efficacy and safety of indomethacin in treating RT-PCR positive covid-19 patients **Materials and Methods** Patients with RT-PCR positive covid-19 who were admitted to hospital were offered the option to receive indomethacin 50 to 75mg daily in addition to the Indian council of medical research (ICMR) standard covid-19 treatment. Patients who declined the indomethacin option were offered paracetamol for pain and fever. The endpoint was the development of hypoxia. Secondary endpoints were time to become afebrile and time to resolution of cough and myalgia. Propensity Score Matching was used to compare indomethacin and paracetamol treatments. A separate group of severely ill patients who were admitted with hypoxia were treated with indomethacin 75mg; the endpoint was the requirement for mechanical ventilation or admission to the intensive care unit (ICU). Blood chemistry was collected before and after the treatment. The patients were monitored every day for clinical parameters. **Results** A total of 104 patients received indomethacin, 82 with mild-moderate disease and 22 with severe disease. Matching reduced the number of patients to 72. In the indomethacin mild-moderate disease group, one patient out of 72 in the matched group developed hypoxia and required oxygen compared with 28 out of 72 patients in the matched group who received paracetamol. Patients who received indomethacin also experienced more rapid symptomatic relief compared to paracetamol arm. In the indomethacin severe disease group no patient deteriorated enough to require mechanical ventilation. There were no adverse reactions to indomethacin or deterioration of renal or liver function. **Conclusion** The use of indomethacin compared with paracetamol, in addition to the standard ICMR treatment in hospitalised covid-19 patients was associated with marked reductions in the severity and duration of illness, without any adverse effects.

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