Impact of SARS-CoV-2 Infection (COVID-19) on Cytochromes P450 Activity Assessed by the Geneva Cocktail

Camille Lenoir, Jean Terrier, Yvonne Gloor, François Curtin, Victoria Rollason, Jules Alexandre Desmeules, Youssef Daali, Jean-Luc Reny and **Caroline Flora Samer**

UNIVERSITÉ DE GENÈVE

Hôpitaux Universitaires Genève

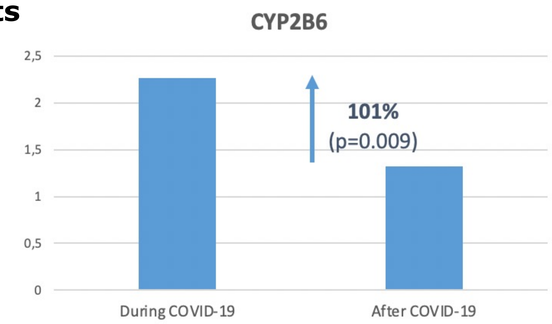
Introduction

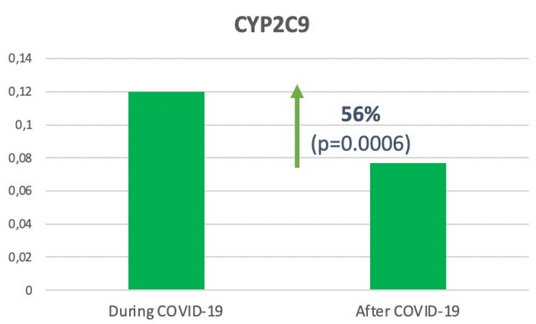
- CYP450 are the major enzymes involved in drug metabolism.
- SARS-CoV-2 infection is a severe acute respiratory syndrome with an underlying inflammatory state.
- Acute inflammation modulates cytochromes P450 (CYPs) activity in an isoform-specific manner.

Methods

- Prospective observational study
- 28 patients with a diagnosis of moderate to severe COVID-19.
- Phenotype assessment was performed using the validated Geneva cocktail as previously described[1]
- The metabolic ratio (MR) of the six main human CYPs were assessed and compared during the first 72 hours of hospitalization and after 3 months.
- C-reactive protein (CRP), interleukin 6 (IL-6), and tumor necrosis factor-α (TNF-α) levels were also measured in blood.

Results

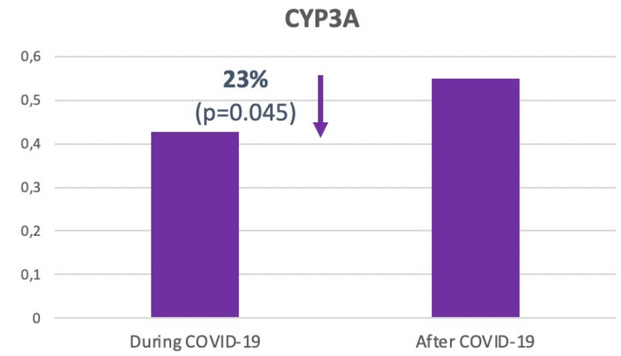


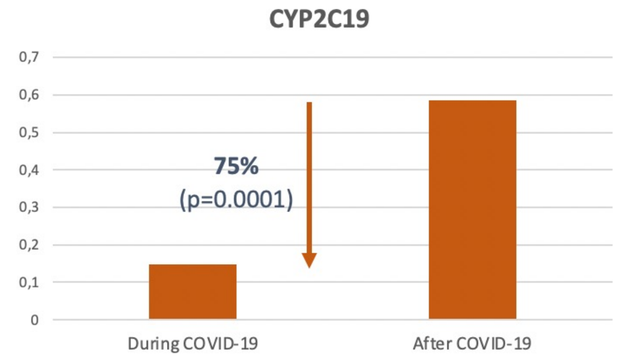


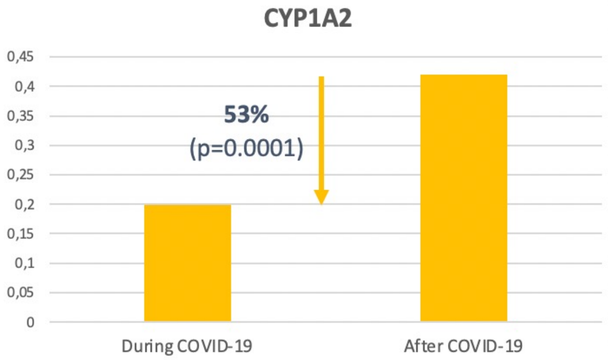
SARS-CoV-2 infection may **impact** the pharmacokinetics of **CYP450 substrates** in an **isoform-specific** and **clinically relevant** manner.

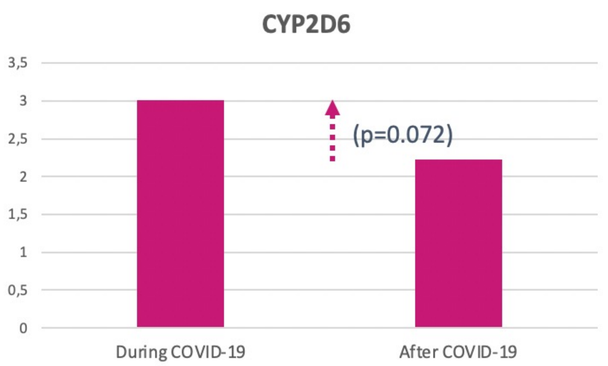
Take a picture to **download** the full text article.

* No conflict of interests









[1] Bosilkovska M et al. Bioanalysis (2014 Jan;6(2):151-64.)