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Post COVID-19 catatonia: Stuporous state in COVID-19 infection

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ABSTRACT

Summary: Catatonia is a common, highly treatable but often unrecognized neuro-behavioral condition that is associated with a wide range of psychiatric and medical etiologies. We present a case report of a 41-year-old female with no prior medical, substance use, or psychiatric history who was brought to the emergency department due to bizarre behavior. History revealed she had fever and cough 1 week prior to onset of the symptoms and was tested positive for COVID-19 infection. She was admitted for COVID-19 infection with encephalopathy. During admission, the patient was found to be in a stuporous state with mutism and slow in response. Physical examination revealed rigidity, posturing and catalepsy. Urine toxicology, computed tomography (CT) brain, magnetic resonance imaging (MRI) brain and lumbar puncture were done and all revealed normal findings. Electroencephalogram (EEG) was performed and showed diffuse slowing of waves. Patient was seen by a neurologist and clinically diagnosed and treated as post COVID-19 catatonia. Her symptoms responded rapidly with benzodiazepine, and she was subsequently discharged home well. This case shows catatonia as the presentation of encephalopathy in association with COVID-19 infection. Saddawi et al concludes that post COVID-19 catatonia pathogenesis is related to systemic inflammation and cytokine storm. Treatment with benzodiazepines results in notable and rapid resolution of catatonia. Therefore clinician should have a high level of suspicion of possible diagnosis of catatonia when a patient in para-infectious or post-infectious states of COVID-19 infection presented with neuropsychiatric symptoms and rigidity. Catatonia is readily treatable and if left untreated, it poses significant risk of morbidity and mortality.

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Gut microbiota circumvents the oral bioavailability challenges of medicinal herbal compounds: A scoping review

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ABSTRACT

Introduction: Ethnopharmacological relevance: The poor oral bioavailability yet high bioactivity of herbal medicines remains an inexplicable issue. Although there have been attempts to theorise this conundrum, very few studies explained the underlying pharmacological actions and how gut microbiota directly affects oral bioavailability. Therefore, a scoping review was carried out.Our objective is to examine herbal medicines; oral bioavailability and examine its association with gut microbiota. **Materials and Methods:** A literature search was conducted on Embase, Medline and Cochrane CENTRAL to identify the related animal and human studies from 2010 onwards. Studies included were analysed from two aspects: how the medicinal herbal compounds or their metabolites influence the hosts gut microbiota and how changes in gut microbiota affect the oral bioavailability of bioactive components of herbal medicines. **Results:** Of the 13 studies found, it was revealed that consumption of certain herbal medicines modulates the abundance and diversity of gut microbiota. On the other hand, gut microbiota circumvents the poor bioavailability issue by secreting β-glucuronidase and β-glucosidase in mediating the biotransformation of the bioactive compounds. The role of gut microbiota in the metabolism of medicinal herbal compounds is displayed through double-peak phenomena. **Conclusion:** It was found that interaction between gut microbiota and herbal medicines is likely to be responsible for circumventing poor oral bioavailability issues. Nonetheless, further studies are required to establish the bidirectional relationship between gut microbiota and herbal medicines.

Keywords: Herbal medicines; medicinal herbs; gut microbiota; oral bioavailability