

CASE REPORT AND LITERATURE REVIEW OF IVERMECTIN-INDUCED COGNITIVE IMPAIRMENT

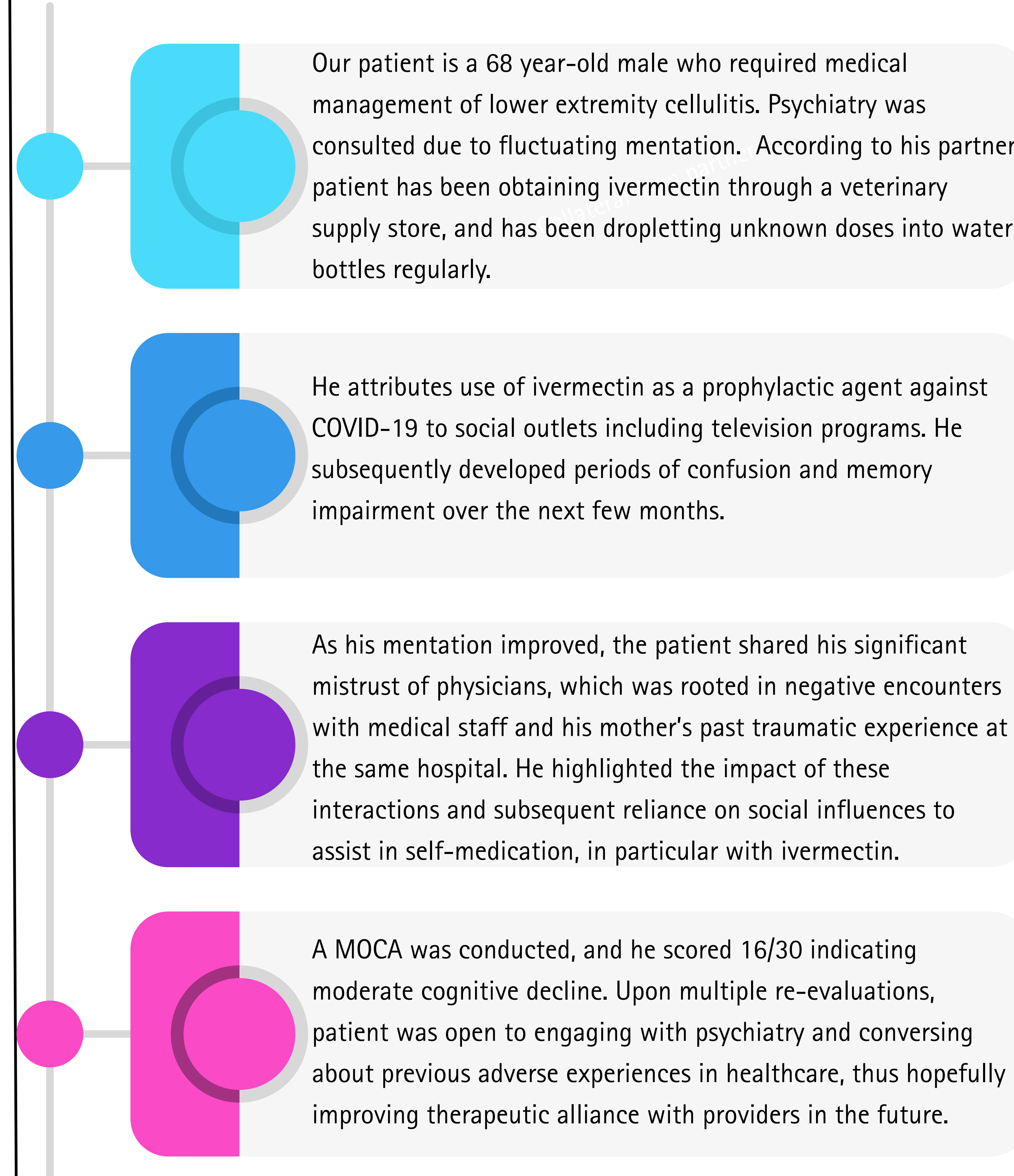
BACKGROUND

- Compounded by sociopolitical differences and multimedia promotion, ivermectin has been recognized as a possible treatment for COVID-19.
- Ivermectin toxicity amidst the COVID-19 pandemic has inflicted on many a multitude of neurologic and gastrointestinal adverse effects.
- The heightened presence of misinformation and mistrust of the medical establishment can impact the provider-patient relationship (Perlis, 2023).
- This case illustrates a patient whose medical mistrust led to self-medication with ivermectin and subsequent cognitive decline.

LITERATURE REVIEW

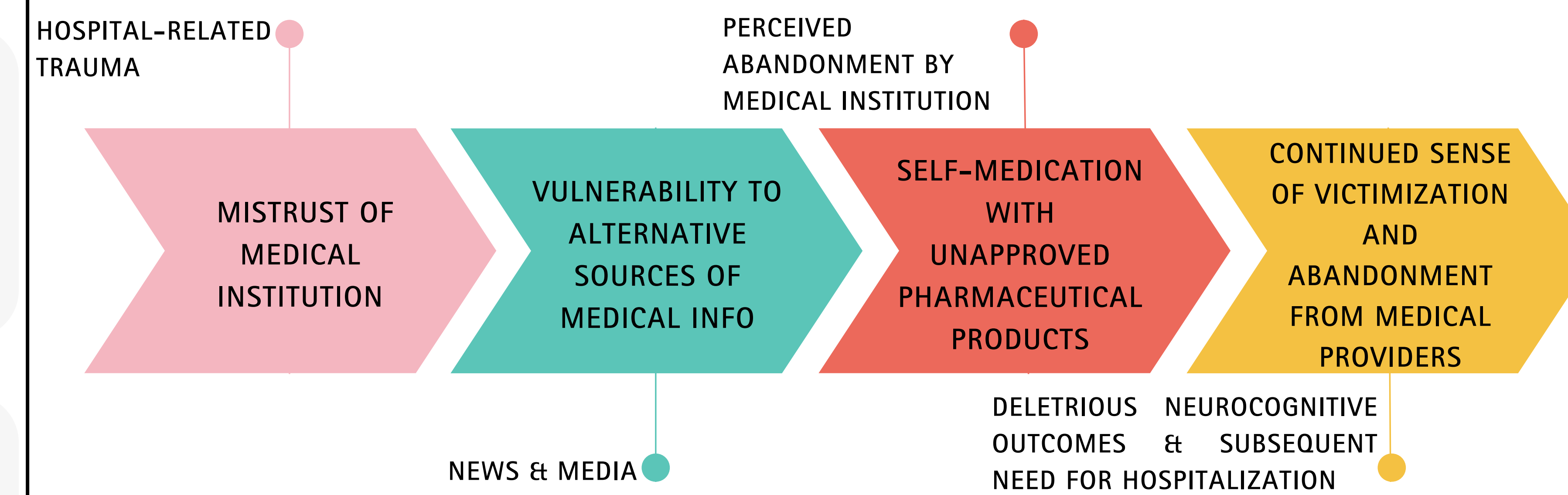
- A literature review revealed three articles that assessed self-supplementation of ivermectin within the COVID-19 pandemic.
- PubMed search terms included "ivermectin," "COVID-19," "misinformation," "medical mistrust," "adverse outcomes," "veterinary formulation" and "neurologic toxicity."
- Two reviews evaluating outcomes highlight the predominant incidence of neurologic toxicity as a result of its administration.
- The investigation into off-label ivermectin use underscore the impact of online dissemination of misinformation and mistrust of the medical establishment.

CASE OVERVIEW



DISCUSSION

- Ivermectin has gained notoriety with escalation of the COVID-19 pandemic.
 - There have been cases of elderly people consuming different formulations who suffered an array of neurologic and gastrointestinal AEs (Hoang, 2022).
- For our patient, his ivermectin use likely contributed to neurocognitive changes over the past few months.
- It was only after continued engagement with the psychiatry team that the patient felt comfortable sharing his mistrust in medicine due to traumatic experiences and details of his turning to medical self-supplementation.
- Through allowing the patient to share details of mistrust, it allowed him to process his trauma, thereby improving his alliance with our team and hopefully other providers in the future.



CONCLUSION & INFLUENCE

- In this case, a patient whose medical management was complicated by long-standing distrust developed chronic ivermectin-induced cognitive changes.
- It is important for consultation-liaison psychiatrists to recognize that, while deleterious behaviors like ivermectin overuse may stem in part from social influences, understanding the individual's adversities can help guide medical management and improve therapeutic care.

REFERENCES

1) Farah R, Kazzi Z, Brent J, et al. Ivermectin associated adverse events in the treatment and prevention of COVID-19 reported to the FACT pharmacovigilance project. Clin Toxicol (Phila). 2022;60(8):942-946. doi:10.1080/15563650.2022.2070187

2) Perlis RH, Lunn Trujillo K, Green J, et al. Misinformation, Trust, and Use of Ivermectin and Hydroxychloroquine for COVID-19 [published correction appears in JAMA Health Forum. 2023 Oct 6;4(10):e234083]. JAMA Health Forum. 2023;4(9):e233257. Published 2023 Sep 1. doi:10.1001/jamahealthforum.2023.3257

2) Hoang R, Temple C, Correia MS, Clemons J, Hendrickson RG. Characteristics of ivermectin toxicity in patients taking veterinary and human formulations for the prevention and treatment of COVID-19. Clin Toxicol (Phila). 2022;60(12):1350-1355. doi:10.1080/15563650.2022.2134788

Reference	Type	Relevance	Findings
Hoang Et. al	Retrospective analysis from Oregon Poison Center	Investigated ivermectin exposure for prevention/treatment of COVID-19	<ul style="list-style-type: none"> • Median age for ivermectin toxicity was 64 • Most prominent AEs included neurotoxicity, GI side effects and MSK complaints • Neurotoxicity was associated with large single or large daily doses of veterinary formulations
Perlis Et. al	Population-based, nonprobability internet survey study	Evaluated misinformation and trust contributing to use of alternative medications in COVID-19	<ul style="list-style-type: none"> • There are ties between sociopolitical identity and non-approved medication use. • Those reporting trust in medical facility less likely to use non evidence-based medications • Alternative treatments for COVID-19 are among most prominent forms of pandemic related misinformation