Available online at www.sciencerepository.org

Science Repository

Case Report

Microbiota Against SARS CoV-2: Case Reports and a Model for Stopping the COVID-19 Pandemic

Goran Belojevic*

Institute of Hygiene and Medical Ecology, Faculty of Medicine, University of Belgrade, Belgrade, Serbia

ARTICLE INFO

Article history:
Received: 12 November, 2020
Accepted: 23 November, 2020
Published: 4 December, 2020

Keyword:
Pandemics
severe acute respiratory syndrome
coronavirus
microbiota
probiotics

ABSTRACT

Background: The aim of this work is to present two case reports of successful prevention and treatment of the COVID-19 and to propose a model for stopping the COVID-19 pandemic with probiotics.

Material and Methods: We present two case reports during the COVID-19 epidemic in Serbia in which probiotics were used for the prevention and treatment of the COVID-19. Based on the biological plausibility we propose a model for stopping the COVID-19 pandemic with probiotics.

Results: In Case 1, a female (75), chain smoker, asthmatic, gets a fever (38.5ºC), and a pronounced weakness. Treated at home with paracetamol. The next morning fever (39.0ºC), more pronounced weakness. We advise to stop with paracetamol and to take a probiotic, 3x1 tablet (4x10exp9 CFU Lactobacillus and Bifidobacterium spec.) during a meal. The same night temperature falls and remains at 36.9ºC, weakness disappears. Feeling healthy and strong ever since. Negative on the ELISA test for the COVID-19. In Case 2, a male, (63), hypertensive, has got infected from a colleague at work who was treated for the COVID-19 in a hospital. Did not take probiotics as prevention. Treated at home with a symptomatic therapy for two weeks, with the symptoms of fever, dry cough, and pronounced weakness. Positive on the ELISA test for the COVID-19. His wife (57), who had been taking one probiotic daily regularly, has felt healthy ever since, although they have slept together. We propose a model for stopping the COVID-19 pandemic. Advice the whole population to take one capsule of probiotics Lactobacillus and Bifidobacterium, during a meal. Those with COVID-19 one capsule three times daily. Those who are on mechanical ventilation- two capsules three times daily.

Conclusion: Based on case reports and the biological plausibility we propose a model for stopping the COVID-19 pandemic with probiotics.

Introduction

We are currently facing an unprecedented pandemic of COVID-19 that affects the world's health and economic and political stability [1]. The absence of efficient treatment or vaccine is causing frustration both among patients and health workers [2]. There is an extremely urgent need for solutions. The first ideas about microbiota as powerful humans' natural allies came from Ilya Ilyich Mechnikov, Russian Zoologist and Nobel Prize Laureate in Physiology and Medicine for 1908. There is a huge army of about 60 trillion commensal bacteria in our colon that protect us from viruses and other biological threats for humans [3].

Indeed, there are evidences that human gut is attacked by SARS CoV-2 with a consequent dysbiosis of microbiota and diarrhea [4]. Gut microbiota modulate ACE2 receptors for SARS CoV-2 which are present both in lung and intestine mucosa [5]. Gut microbiota promote a balanced reaction of human immune system thus preventing respiratory infectious diseases and acute respiratory distress syndrome [6]. The proposals of using probiotics for the prevention and treatment of

**Correspondence to: Goran Belojevic, M.D., Ph.D., Institute of Hygiene and Medical Ecology, Faculty of Medicine, University of Belgrade, Dr. Subotica starijeg 8, 11000, Belgrade, Serbia; Tel: 381113612762; Fax: 381112682852; E-mail: goran.belojevic@med.bg.ac.rs*

http://dx.doi.org/10.31487/j.JCMCR.2020.04.02

COVID-19 have been published [7, 8]. The aim of this work is to present two case reports of successful prevention and treatment of the COVID-19 and to propose a model for stopping the COVID-19 pandemic with probiotics.

Methods

We present two case reports during the COVID-19 epidemic in Serbia in which probiotics were used for the prevention and treatment of the COVID-19. Based on the biological plausibility we propose a model for stopping the COVID-19 pandemic with probiotics.

Results

Case 1

26 March 2020 morning, female (F.Dj. Belgrade, Serbia), 75 years, chain smoker in the previous 50 years, asthmatic in the previous 30 years (Th: ipratropium bromide/fenoterol hydrobromide, inhaler). Fever (38.5ºC), and a pronounced weakness. Treated at home with one tablet of paracetamol 500mg. The same night temperature falls to 37.7ºC.

27 March 2020 morning, fever 39.0ºC, more pronounced weakness. We advise to stop with paracetamol and to take a probiotic 3x1 tablet (4x10exp9 CFU Lactobacillus and Bifidobacterium spec. in one tablet) during a meal. The same night temperature falls and remains at 36.9ºC, weakness disappears. Continues with the probiotic therapy for a week. Feeling healthy and strong ever since. Negative on the ELISA test for the COVID-19.

Case 2

15 July 2020, male (D.P.), 63 years, hypertensive, under anti-hypertensive therapy. Got infected from a colleague at work who was treated for the COVID-19 in a hospital. Did not take probiotics as prevention. Treated at home, with a symptomatic therapy for two weeks with the symptoms of fever, dry cough and pronounced weakness. Positive on the ELISA test for the COVID-19. His wife (J.P.), 57 years, who had been taking one probiotic daily regularly, has felt healthy ever since, although they have slept together.

A Model for Stopping the COVID-19 Pandemic

Advice the whole population to take one capsule of probiotics Lactobacillus and Bifidobacterium, during a meal [9]. Those with at least one symptom of COVID-19 (raised temperature, weakness and dry cough)- one capsule three times daily. Those who are on non-invasive or invasive mechanical ventilation- two capsules of probiotics three times daily via oral or enteral feeding. There are no major side effects. There is no age limit.

Conclusion

Thousands of lives are being lost daily during this horrible pandemic and the solutions are desperately needed. Based on two case reports and the biological plausibility we propose a model for stopping the COVID-19 pandemic with probiotics.

References

1. COVID19 (2020) Coronavirus Pandemic.
2. Mc Fee RB (2020) COVID-19: Therapeutics and interventions currently under consideration. *Dis Mon*. [Crossref]
3. Ley RE, Peterson DA, Gordon JI (2006) Ecological and Evolutionary Forces Shaping Microbial Diversity in the Human Intestine. *Cell* 124: 837-848. [Crossref]
4. Velavan TP, Meyer CG (2020) The COVID-19 epidemic. *Trop Med Int Health* 25: 278-280. [Crossref]
5. Dhar D, Mohanty A (2020) Gut microbiota and Covid-19- possible link and implications. *Virus Res* 285: 198018. [Crossref]
6. He Y, Wang J, Li F, Shi Y (2020) Main clinical features of COVID19 and potential prognostic and therapeutic Value of the Microbiota in SARS CoV-2 Infections. *Front Microbiol* 11: 1302. [Crossref]
7. Belojevic G, Prasher D (2019) Music of microbiota against SARS CoV-2. *Noise Health* 21: 97. [Crossref]
8. Bottari B, Castellone V, Neviani E (2020) Probiotics and Covid-19. *Int J Food Sci Nutr* 12: 1-7. [Crossref]
9. Sonomoto K, Yokota A (2011) Lactic Acid Bacteria and Bifidobacteria: Current Progress in Advanced Research. *Poole (UK): Caister Academic Press*.