



Case Report

The effects of immutonic capsule on CD4 T-Lymphocytes cells count: A case report

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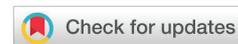
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Abstract

Introduction: Many herbs and natural food materials have been historically recognized as an effective that can establish a balanced inflammatory response and promoting healthy immune response as well as have antibacterial and viral effects. The clinical use of some medications can cause serious side effects. We proposed that natural ingredients could serve as food supplement, immune tonic and antibacterial & viral which a better prophylactic and therapeutic approach against COVID-19 and others infections.

Case presentation: A 52-years-old Yemeni female normal healthy volunteer for taken Immutonic capsule three times after meal daily for one week. She was free from significant cardiac, hepatic, renal, pulmonary, gastrointestinal, neurological or hematological disease as determined by way of medical histories, physical examinations. Blood CD4 T-Lymphocytes cells was tested before and after taken IMMUTONIC capsule. The results show that Immutonic capsule increased CD4 T-Lymphocytes cells count from 49.7% to 61.4% of total white blood cells which was $4.1 \times 10^3/\text{UL}$ and $4.0 \times 10^3/\text{UL}$ respectively.

Conclusion: The present case indicated that Immutonic capsule boosting and enhancing immune system which can be used as better prophylactic, boosting immunity and therapeutic against COVID-19 and others infections.

Introduction

Many food ingredients like *Nigella sativa* seed have been historically recognized as an effective panacea that can establish a balanced inflammatory response and promoting healthy immune response. Garlic, ginger and black pepper are used as food supplements in India during the time of infectious diseases. Literature shows that they have anti-inflammatory effects [1]. Many studies showed both prophylactic and curative effects against *Chicungunya* during the epidemic in Kerala from 2006–09. Stimulate [2], immune cells such as T and Natural killer cells and macrophages effects [3], of garlic, anti-inflammatory [4] and related effects of black pepper [5], anti-inflammatory [6] and anti clotting effects of ginger [7], have been reported by many workers. These principles are

known as nutritional food supplements or nutraceuticals that give protection to our body from many diseases. Therefore these and related food materials have medicinal potential and they form the common ingredients for the indigenous system of medicines in India, Yemen, China and else where. More than 199 countries worldwide are affected by a new coronavirus disease (COVID-19) caused by infection with SARS-CoV-2. There is an urgent need to identify safe and effective food supplement to boosting immune system [8]. The hypothesis of new formulation of IMMUTONIC capsule contain mixture of six natural food materials/ingredients with different amounts for each one which was done by Prof. Dr. Hussien O. Kadi (Patent).

We proposed that natural food supplements could serve as a better prophylactic, boosting immunity and therapeutic approach.

Case presentation

A 52-years-old Yemeni female normal healthy volunteer for taken Immutonic capsule three times after meal daily for one week. She was free from significant cardiac, hepatic, renal, pulmonary, gastrointestinal, neurological or hematological disease as determined by way of medical histories, physical examinations. Blood CD4 T-Lymphocytes cells was tested before and after taken IMMUTONIC capsule. Volunteer gave a written informed consent and the Ethics Committee of Yemen University, Faculty of medical Sciences approved the clinical protocol and have been performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

The results show that Immutonic capsule increased CD4 T-Lymphocytes cells count from 49.7% to 61.4% of total white blood cells which was $4.1 \times 10^3/\text{UL}$ and $4.0 \times 10^3/\text{UL}$ respectively as shown in the figure. This case was one case of 48 volunteers of clinical study of IMMUTONIC capsule on blood immune parameters and Flu symptoms to approved its effects [9,10] Figure 1.

Discussion

Many therapeutic effects of herbs and food materials/ ingredients have been suggested to be due to their wide array of immunomodulatory effects and influence on the immune system of the human body. Phytochemicals such as flavonoids, polysaccharides, lactones, alkaloids, diterpenoids and glycosides, present in several herbs and food materials/ ingredients, have been reported to be responsible for the immunomodulating properties [9]. Many reviews reported that herbs and food materials/ingredients derived compounds (curcumin, resveratrol, epigallocatechol-3-gallate, quercetin, colchicine, capsaicin, andrographolide, and genistein) which have exhibited potent effects on cellular and humoral immune

functions and have been identified over the years for their immunomodulatory characteristics. Numerous illnesses can be alternatively treated by immunomodulation using medicinal plants, instead of chemotherapy [11]. Therefore it is an essential need to use some of the traditional medicines and combine the modern drug to inhibit the viral activity [12].

H O. Kadi [13], reviewed that garlic, onions, black bean, ginger, black and green pepper, which have an anti-virus effect [14].

Maiti S, et al. [15], reported that Nigellidine has immunomodulatory/anti-inflammatory and antioxidant activities as well as it inhibits important proteins of COVID-19. Antiviral and anti-inflammatory of garlic, black pepper and ginger. The biological actions of garlic principles have been attributed to its poly sulfides which react with -SH groups free radicals and also stimulants immune cells such as T and Natural killer cells and macrophages.

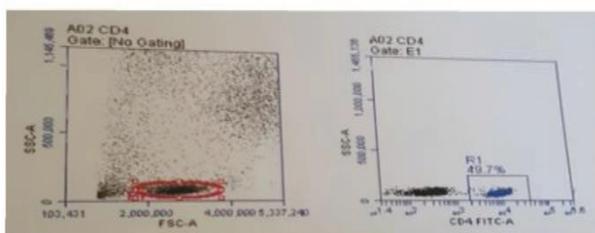
Conclusion

The present case indicated that Immutonic capsule boosting and enhancing immune system which can be used as better prophylactic, boosting immunity and therapeutic against COVID-19 and others infections.

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Before



After

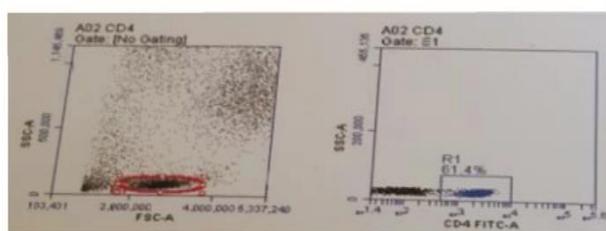


Figure 1: The effect of Immutonic capsule on CD4 T-Lymphocytes after 7 days.



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