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The Use of Fresh Pomegranate Juice in the Treatment of Covid-19: Clinical Case Study

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Abstract:

Since its discovery, COVID-19 has changed and reshaped our lives, and scientists and researchers are competing to find out therapeutic options and vaccines. The main objective of the present study was to report our experience in treating three cases that proved positive by polymerase chain reaction (PCR) by fresh juice of pomegranate in different therapeutic models of COVID-19 treatment. The first case was a male aging 56 years. He was instructed to use fresh pomegranate juice as a preconditioning model to protect him against the possibility of exposure to COVID-19. His family later were infected by a coronavirus in addition to him. His disease passed unnoticed in comparison with the remaining members of his family. The second case was a female, 64 years, who was hospitalized for being positive for COVID-19 by PCR. She had severe symptoms associated with corona and her oxygen saturation was as minimal as 50% and the ventilator was required. Her family members decided that their mother is best in her home instead of the hospital as far as they can obtain an oxygen ventilator. Her sons were instructed to give her fresh pomegranate juice. The first impression was that her oxygen saturation increased to above 90%. After 5 days, she was in a good health and tested for COVID-19 by PCR, and the result was negative. The third case was positive for COVID-19 and had lung fibrosis. Her oxygen saturation was as minimal as 40% and its beak was 80% using a ventilator. After using one liter of fresh pomegranate juice, she had become in a good health and her oxygen saturation percent reached 98%. The use of fresh pomegranate juice is a promising therapeutic approach for COVID-19 and can be developed as a formal therapeutic for COVID-19 by pharmaceutical companies.

INTRODUCTION

Human Covid has been discovered for more than 50 years (Ashour *et al.*, 2020). Pathologic events associated with Covid such as respiratory diseases have been described in various types of infection including Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS), that were caused by SARS-CoV and MERS-CoV, and the current Covid Disease 2019 (COVID-19) (Zhang *et al.*, 2020). Coronavirus belongs to the novel SARS-CoV-2, which has similar genetic material to MERS-CoV and SARS-CoV (Lai *et al.*, 2020).

Manifestations of COVID-19 are varied and can be started within 2-14 days of the infection, including fever, dry hack, dyspnea, sore throat, and vomiting (Lupia *et al.*, 2020).

In the mid of April 2020, more than 1.85 million persons were reported to have Covid disease (COVID-19), among them approximately 429,028 cases were recovered and more than 114,331 were passed (JHU, 2020; Liu *et al.*, 2020). Dexamethasone is recommended by the World Health Organization (WHO) to be included in treatment options for hospitalized patients and it is also recommended for patients who required oxygen by Australian guidelines (WHO, 2020).

Antiviral therapeutic options for COVID-19 are under trials although their results are not promising (Sanders *et al.*, 2020). Remdesivir has been recommended for patients with severe COVID-19 (Rizk *et al.*, 2020). Corticosteroids are recommended in severe cases to reduce the risk of death (Guideline, 2020).

Pomegranate has been known since ancient times. It is composed of flowers, roots, fruits, and leaves. Although it is now known at the global level, it was originally known in Central Asia, the Mediterranean, and California. Pomegranate has several uses based on its parts such as seeds, leaves, and membranes, which implies nutritional and healthy uses. Pomegranate has phytochemical elements in its fruits including proanthocyanidins, vitamins, mineral salts, and organic acids; this implies the existence of benefits from biological and nutraceutical points of view. Various studies

have revealed the potential of pomegranate to be used in the preparation of new formulations against many diseases such as neoplastic, cardiovascular, and viral diseases (Caruso *et al.*, 2020).

The skin of pomegranate attributes to 50% of its weight. Pomegranate is considered a crucial source of important elements such as flavonoids, potassium, magnesium, and iron. It has also antioxidant substances, alpha-linolenic acid (omega 3), linoleic acid (omega 6), and oleic acid (omega 9) (Andreu-Sevilla, 2008; Viuda-Martos, 2010).

The main objective of the present study was to report our experience in treating three cases that proved positive by polymerase chain reaction (PCR) by fresh juice of pomegranate in different therapeutic models of COVID-19 treatment.

Case study

Prophylactic effect of pomegranate juice against COVID-19

The first case was a male aging 56 years. He was instructed to use fresh pomegranate juice as a preconditioning model (prophylactically) to protect him against the possibility of exposure to COVID-19. His family later was infected by the corona virus in addition to him. His disease passed unnoticed in comparison with the remaining members of his family. This means pomegranate fresh juice is potentially able to protect against COVID-19 in an effective, cheaply, and easily model or approach.

The therapeutic effect of pomegranate juice against COVID-19

The second case was a female, 64 years, who was hospitalized for being positive for COVID-19 by PCR. She had severe symptoms associated with corona and her oxygen saturation was as minimal as 50% and a ventilator was required. Her family members decided that their mother is best treated in her home instead of the hospital as far as they can obtain oxygen supplying device. Her sons were instructed to give her

fresh pomegranate juice. The first impression was that her oxygen saturation increased to above 90%. After 5 days, she was in a good health and tested for COVID-19 by PCR, and the result was negative. From this case, it is plausible to include pomegranate in therapeutic options against COVID-19.

The therapeutic effect of pomegranate juice against COVID-19 with lung fibrosis

The third case was positive for COVID-19 and had lung fibrosis. Her oxygen saturation was as minimal as 40% and its beak was 80% using a ventilator. Due to the consideration that the capacity of hospitals is almost full, and her sons perceived that being at home is better for their mother, they decided to get care of their mother in their home. After using one liter of fresh pomegranate juice over two days, she had become in a good health and her oxygen saturation percent reached 98%.

This case was interestingly indicating that lung fibrosis and its associated oxygenation problems can be managed by the use of fresh pomegranate juice.

DISCUSSION

Due to the high impacts of the COVID-19 pandemic, scientists are competing to discover new therapeutic options and/or vaccines. This study may be the first report to describe an easy, effective, and cheap approach to treat COVID-19.

The use of fresh pomegranate juice was chosen for these therapeutic trials due to its unique characteristics such as rich content of antioxidants and other components (Andreu-Sevilla et al., 2008; Viuda-Martos et al., 2010; Caruso et al., 2020). Further studies are required to establish its therapeutic options.

CONCLUSION

The results of the present study showed that the use of pomegranate fresh juice can be used for

prophylactic and therapeutic options against COVID-19.

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CONFLICT OF INTEREST

There is no conflict of interest.

REFERENCES

- Andreu-Sevilla, A.J.S.-P., A.J.; Carbonell-Barrachina, A.A. La Granada Y Su Zumo, 2008. Producción, Composición Y Propiedades Beneficiosas Para La Salud. Inf. Univ. Miguel Hernández Elchedigital, 234: 36–39.
- Ashour, H.M., Elkhatib, W.F., Rahman, M.M., Elshabrawy, H.A., 2020. Insights into the Recent 2019 Novel Coronavirus (SARS-CoV-2) in Light of Past Human Coronavirus Outbreaks. Pathogens (Basel, Switzerland), 9(3).
- Caruso, A. et al., 2020. Pomegranate: Nutraceutical with Promising Benefits on Human Health. Appl. Sci., 10(19): 6915.
- Guideline, W., 2020. Update to WHO guideline on drugs for COVID-19. BMJ, pp. m4475.
- JHU, 2020. COVID-19 dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU).
- Lai, C.C., Shih, T.P., Ko, W.C., Tang, H.J., Hsueh, P.R., 2020. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease-2019 (COVID-19): The epidemic and the challenges. Int. J. Antimicrob. Agents., 55(3): 105924.

- Liu, K. et al., 2020. Clinical characteristics of novel coronavirus cases in tertiary hospitals in Hubei Province. *Chin. Med. J. (Engl.)*, 133(9): 1025-1031.
- Lupia, T. et al., 2020. 2019 novel coronavirus (2019-nCoV) outbreak: A new challenge. *J. Glob. Antimicrob. Resist.*, 21: 22-27.
- Rizk, J.G. et al., 2020. Expanded Access Programs, compassionate drug use, and Emergency Use Authorizations during the COVID-19 pandemic. *Drug Discov. Today*: S1359-6446(20)30509-2.
- Sanders, J.M., Monogue, M.L., Jodlowski, T.Z., Cutrell, J.B., 2020. Pharmacologic Treatments for Coronavirus Disease 2019 (COVID-19): A Review. *JAMA*, 323(18): 1824-1836.
- Viuda-Martos, M.F.-L., J.; Perez-Alvarez, J.A., 2010. Pomegranate and its Many Functional Components as Related to Human Health: A Review. *Compr. Rev. Food Sci. Food Saf.*, 9: 635–654.
- WHO, 2020. Coronavirus disease (COVID-19): Dexamethasone. World Health Organization.
- Zhang, T., Wu, Q., Zhang, Z., 2020. Probable Pangolin Origin of SARS-CoV-2 Associated with the COVID-19 Outbreak. *Curr. Biol.*, 30(7): 1346-1351.e2.