Correlação entre ginseng radix e o novo coronavírus sobre um possível tratamento alternativo futuro

Correlation between ginseng radix and the novel coronavirus about a possible future alternative treatment

Correlación entre la radix de ginseng y el nuevo coronavirus sobre un posible tratamiento alternativa futuro

Recebido: 17/06/2020 | Revisado: 01/07/2020 | Aceito: 12/07/2020 | Publicado: 30/07/2020

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Resumo

Em 2019, na cidade de Wuhan (China), houve um surto de um novo coronavírus, que causa infecções respiratórias em crianças e adultos e uma nova condição foi relatada como COVID-19. O presente estudo trata de medicamentos fitoterápicos e sua correlação com doenças do trato respiratório basicamente COVID-19. Até o momento, não existem estudos mostrando como o Ginseng Radix coopera na prevenção ou no tratamento de doenças por coronavírus, portanto, o objetivo do presente estudo foi o de analisar na literatura sobre isso. O objetivo do presente estudo, é fazer a correlação entre o uso de Ginseng Radix com o novo coronavírus, buscando alternativas para um possível novo tratamento. O presente estudo é fruto de uma revisão integrativa da literatura, onde as palavras-chave foram pesquisadas nas bases de dados Pubmed e Scielo, as palavras-chave (fitoterápicos, Ginseng radix e infecções por coronavírus) estão presentes no DeCS. Os fitoterápicos são famosos terapêuticos alternativos para o tratamento da maioria das doenças, sendo cardiológicas, imunológicas e as demais por vias respiratórias. O uso de medicamentos fitoterápicos é uma prática secular, e encontramos o mais popular, mas o presente estudo trata da raiz do ginseng. O ginseng é um fitoterápico derivado da raiz do panamá e seu uso é descrito desde o primeiro milênio. Suas propriedades

estão prevenindo muitas doenças, incluindo câncer, hipertensão e outras descritas na literatura. O Ginseng radix é um medicamento fitoterápico utilizado no tratamento de crianças e adultos, em particular os problemas do trato respiratório, e existe uma diretriz específica para os fitoterápicos e o seu uso na prática clínica.

Palavras-chave: Fitoterápicos; Ginseng radix; Infecções por Coronavírus.

Abstract

In 2019 in Wuhan city (China), is was outbreak about a novel coronavirus, causes an infections respirator, in children and adults, and is new condition was call for COVID-19. The present study being about herbal medicines and their correlation with diseases on respiratory tract basically COVID-19. To date, there are no studies showing how Ginseng Radix cooperated with the prevention or for to treat coronavirus diseases, so the aimed the present study was a to analyze in literature about this. The aim is to observe the correlation about the Ginseng Radix as a future treatment in novel coronavirus. The present study is a fruit of a review integrative of literature, where the keywords was search in databases Pubmed and Scielo.org, the keywords (Herbal medicines, Ginseng radix and Coronavirus infections) are presents in DeCS. The herbal medicines are famous alternative therapeutic for the treatment a most diseases, when used the herbal medicines for various diseases, being diseases cardiology, immunology, and too tract respiratory. The use for the herbal medicines is a secular practice, and we found a most popular, but is present study is about the ginseng radix. Ginseng is an herbal medicine derived from the root of the panax, and your use is described since the first millennium, your properties are preventing many diseases, including cancer, hypertension, and others, described in the literature. The Ginseng radix is an herbal medicine be used in the treatment for the children and adults, the problems for the tract respiratory, and exists a guideline specific for the herbal medicines and the use in clinical practice.

Keywords: Herbal medicines; Ginseng radix; Coronavirus infections.

Resumen

En 2019 en la ciudad de Wuhan (China), se produjo un brote sobre un nuevo coronavirus, causó un respirador de infecciones, en niños y adultos, y se solicitó una nueva condición para COVID-19. El presente estudio trata sobre las hierbas medicinales y su correlación con enfermedades en las vías respiratorias, básicamente COVID-19. Hasta la fecha, no hay estudios que muestren cómo Ginseng Radix cooperó con la prevención o para tratar las enfermedades por coronavirus, por lo que el objetivo del presente estudio fue analizar en la

literatura sobre esto. El presente estudio es fruto de una revisión integradora de la literatura, donde las palabras clave se buscaron en las bases de datos Pubmed y Scielo.org, las palabras clave (medicamentos herbales, radix de ginseng e infecciones por coronavirus) están presentes en DeCS. Las hierbas medicinales son famosas alternativas terapéuticas para el tratamiento de la mayoría de las enfermedades, cuando se usan las hierbas medicinales para diversas enfermedades, como enfermedades cardiológicas, inmunológicas y respiratorias. El uso de los medicamentos a base de hierbas es una práctica secular, y encontramos uno de los más populares, pero este estudio actual trata sobre la raíz de ginseng. El ginseng es un medicamento a base de hierbas derivado de la raíz del panax, y su uso se describe desde el primer milenio, sus propiedades previenen muchas enfermedades, incluido el cáncer, la hipertensión y otras, descritas en la literatura. La raíz de Ginseng es un medicamento a base de hierbas que se utiliza en el tratamiento de niños y adultos, en particular los problemas del tracto respiratorio, y existe una guía específica para los medicamentos a base de hierbas y el uso en la práctica clínica.

Palabras clave: Medicamentos a base de hierbas; Ginseng radix; Infecciones por coronavírus.

1. Introduction

In 2019 in Wuhan city (China), is was outbreak about a novel coronavirus, causing an infections respirator, in children and adults, and is new condition called COVID-19 (Meng, et al., 2020). The conditions clinical the patients are the several and causes including deaths (Tian, et al., 2020). No are treatments, and vaccines or medicine, and the World Health Organization (WHO) declares pandemic in the world, it was in only local and rapidly was beginning in the various locals and cities, causing of deaths and panic in the population (Sohrabi, et al., 2020).

COVID-19 is caused for SARS-Cov-2, present in family Coronavírus. A Mers-Cov was an epidemic in place of Orient in 2012, being reported a several diseases, these virus in organism human negatively impact nutritional and an inflammatory clinical condition (Rothan & Byrareddy, 2020).

About the novel coronavirus is implicated in a disease that is hard to treat, because not a treatment adequate for this in a traditional medicine (Singhal, 2020), but in an alternative medicine are herbal medicines used for the to treat a Influenza, Pneumonia and other diseases,

especially Ginseng Radix (Chen & Cosen, 2018), is the herbal medicine a future alternative therapeutic in novel coronavirus?

This disease is hard to treat because of its diagnoses clinical are different between patients, while some patients are low intensity prognostic and other patients are a high intensity prognostic (Vankadari & Wilce, 2020). However, most herbal medicines are being contribution for studies (Ang, et al., 2020).

Several studies about COVID-19 have been available, and did not a found a treatment yet, but the researchers are trying to find a medicine, being a continuous progress in scientific literature (Rasmussen, et al., 2020).

Thus, it is critical to determine which are they the herbal medicines includes in the prevention of COVID-19 (Lauer, et al., 2020), about the herbal medicines the present study analyze the correlation between the ginseng radix and a novel coronavirus, about our information in the treatment or prevention in diseases for tract respiratory.

The present study being about herbal medicines and your correlation with diseases on respiratory tract basically COVID-19. Herbal medicines are be used in the treatment for various diseases, and in prevention before the pathologies, but do not speaks about they in correlation an affirmative prevention in the COVID-19.

The aim in the present study is to observe the correlation about the Ginseng Radix and the novel coronavirus, with your implications in the future alternative treatment.

To date, there are no studies showing how Ginseng Radix cooperated with the prevention or for to treat coronavirus diseases, so the aimed the present study was a to analyze in literature about this.

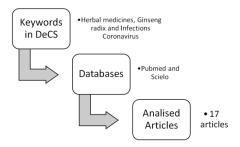
2. Methods

Present study is a fruit of a literature review research integrative, where the keywords was search in databases Pubmed and Scielo.org, the keywords (Herbal medicines, Ginseng radix and Coronavirus infections) are presents in DeCS, and the combinations with hers in databases.

Selection and collect the studies was following a protocol describes before for other authors, with articles idiom only in English, the articles are the last five years, was included a articles originals and reviews and a not included a theses, dissertations, editorials, and texts which are did not thematic discussed.

The Flowchart 1 is about the literature review research in databases and the keywords utilized for the authors, with the combination between the words using the Booleans Operators AND, OR and AND NOT.

Flowchart 1. Picture of study.



Source: Authors.

In the Flowchart 1 is presented the states about the literature review research, and the total of articles analyzed, and the keywords in databases.

3. Results and Discussion

3.1 Coronavirus family

In 2002 is an outbreak about the virus Sars-Cov, the virus is present in the family coronavirus, and the virus is dangers for the health, causes pneumonia and infections respiratory, and the virus was found in the hospitals in the world now (Liu, et al., 2017), when your diagnoses of patients are very similar, that new condition is called COVID-19, and your virus caused is Sars-Cov-2 (Rabaan, et al., 2020).

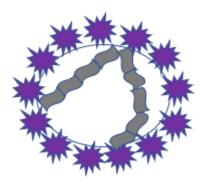
Most cases have been reported in cities and countries around the world, in 2019 and a novel coronavirus was detected being Sars-Cov-2, the virus was similar a other virus of family coronavirus (Zhang, et al., 2020), thus, the first relate about the pandemic for coronavirus was a more two decades, and actually continue without vaccine, medicine and treatment, but were studies about the virus in various studies centers (Rabaan, et al., 2020).

In 2012 is an outbreak causes for Mers-Cov in Orient, in high prevalence of infection contributed for the transmission, because first for animals and later for human, and the human transmission was in unique local (Song, et al., 2019).

The Coronavirus family is most cited in various study because the virus is recent and not, yet the researchers found the vaccine or cure and your symptoms are aggravated according to organism, the human body clinical reacted multiple actions.

3.2 COVID-19

Figure 1. Viral particle.



Source: authors.

In present study in the Figure 1 is representation about viral particle, this is present in all virus of the family coronavirus being Sars-Cov, Mers-Cov and Sars-Cov-2, and your actions are be represented for the replication in hospitable organism animal and human, and yours transmission is speedy.

Viral particle

Viral Receptor

Replication

Figure 2. The viral receptor.

Source: Authors.

Figure 2 is a representation graphic about viral particle for the family coronavirus, created by the authors for this paper.

The viral particle is a representation about the Sars-Cov and Mers-Cov, these have a principals receptors and yours ligations are for these, when receptor for the Sars-Cov is a angiotensin-converting enzyme 2, and the receptor for the Mers-Cov is dipeptidyl peptidase 4 (Wit, et al., 2016).

An increase in transmission by the animal for the human in Sars-Cov-2 provoked a several pneumonia COVID-19, and a several symptoms in the patients, causes of deaths, but the most patients are cured without vaccine (Song, et al., 2019).

The incubation period the virus in organism is approximately 2-15 days, this period is totally asymptomatic, and the individuals are not manifested of feelings diseases (Zhang, et al., 2020). Thus, the manifestation the syntomic is after period of incubation, and after that the patient's evolutions a cure or a need require mechanical ventilation in stage several in the Care Intensive Unit (Kannan, et al., 2020).

Patients after recovery of health, not necessary leave the mechanical ventilation, but they presented good clinical evolution, with the use of medicine and the herbal medicine with doctor's recommendations and the guidelines of health.

3.3 Herbal medicines

The herbal medicines are famous alternative therapeutic for the treatment a most diseases, when used the herbal medicines for various diseases, being diseases cardiology, immunology, and too tract respiratory (Ang, et al., 2020). The use for the herbal medicines is a secular practice, and we found a most popular herbal medicines, but is present study is about the ginseng radix.

In an epidemic Influenza, in traditional medicine Unani, was a utilized various herbal medicine, coronavirus have caused a several acute respiratory, and the medicine Unani was a used this herbal medicine (Nikhat, Fazil, 2020). The botanical name was utilized in studies about the medicine Unani, is found in various countries, and your names was a Aloe Vera, Bambusa, both are an anti-oxidant and anti-inflammatory, but the medicine not (Yang, et al., 2020).

In study about the Chinese medicine in correlation to Influenza, and pneumonia disease, the authors discusses about the details of the preventive herbal, and your characteristics anti-inflammatory (Hui, et al., 2020).

The traditional medicine Chinese is having a potential in preventive or curative patients with Covid-19, because this medicine is an extremely popular be used in treatment for other diseases respiratory (Li, et al., 2020).

Herbal medicines are very most popular, and are used in the specific hospitals, and the people were utilized for a treatment for diseases, the authorities of health and the doctors were recommended your use (Yu, et al., 2020).

The guidelines were recommended the use of herbal medicines, considering the literature evidence, about researchers and studies were conducted with patients and the herbal medicines, but the question is about your correlation with Covid-19 (Jin, et al., 2020).

The use of herbal medicines is practiced as long as the beginning the world, and the conditions for the utilized is favorable because they are found in the most locals and these places are not necessary larges surfaces for your cultivation.

3.4 Ginseng radix

Ginseng is an herbal medicine derived from the root of the panax, and your use is described since the first millennium, your properties are preventing many diseases, including cancer, hypertension, and others, described in the literature (Chen, Cohen, 2018).

The Ginseng radix is an herbal medicine be used in the treatment for the children and adults, in particular the problems for the tract respiratory, and exists a guidelines specific for the herbal medicines and the use in clinical practice (Ang, et al., 2020).

Some herbal plants are been used for a treatment in various diseases, because this herbal plants are a particularly potential antiviral activities, and the natural compounds were related in studies, the authors questions between the ginseng radix and the novel coronavirus (Zhang, et al., 2020).

The guidelines about the traditional medicine Chinese, were identified the herbal formulae, and your association with Covid-19, because this disease was a different stage, and each stage have a specific symptom (Ang, et al., 2020).

The ginseng radix formulae where be used for prevention for various diseases, and your correlation with the acute disease respiratory is most popular, and your use in prevention or treatment in cold or flu (Mousa, 2017).

In many diseases are be used the ginseng, for the human health protect and treatment in respiratory diseases, the natural compounds about the ginseng is applied in human

healthcare, these plants are cultivated in countries like Korea, China, Japan (Szczuka, et al., 2019).

The correlation about the antioxidant properties of ginseng was studied in many studies, because this herbal medicine is utilized in adults and children, and your potential therapeutic was studied in many diseases (Chen, Cohen, 2018).

In experimental studies were observed the properties of ginseng and your capacity to improve the antibody in viral diseases, induced significantly higher about your protection against viral activities (Ma, et al., 2019).

According to presented in the Figure 3, about the properties, and the effect antiviral of Ginseng Radix in the human body, after the actions of Ginseng the virus activity start decrease, and the evolution of patients is notable.

Viral disease Action of ginseng

Figure 3. Action of ginseng.

Source: authors.

The Figure 3 is a representation about viral disease in the human body and the antiviral properties of ginseng, created by the authors for this paper.

4. Conclusion

The present study was found results about the properties antiviral of ginseng, and your correlation with respiratory diseases, related in literature.

The ginseng is most popular, and your activities are observed in prevention and treatment these diseases. But, in correlation about the ginseng and Covid-19, are will necessarily most studies, because in the literature is insufficient for answer this question.

Are necessary most study including herbal medicine, especially Ginseng Radix with your correlation in the human body when this is infected with Coronavirus, primarily Sars-Cov-2 and between caused Covid-19.

References

Ang, L., Lee, H.W., Choi, J.C, Zhang, J. & Lee M. (2020). Herbal medicine and pattern identification for treating COVID-19: a rapid review of guidelines. *Integrative Medicine Research*. 9, 100407, https://doi.org/10.1016/j.imr.2020.100407.

Caccialanza R., Laviano, A., Labascio, F., Montagna, E., Bruno, R., Ludovini, S., Corsico, A. G., Sabatino, A., Belliato, M., Calvi, M., Lacona, I., Grugnetti, G., Bonadeo, E., Muzzi, A., & Cereda E. (2020). Early nutritional supplementation in non-critically ill patients hospitalized for the 2019 novel coronavirus disease (COVID-19): rationale and feasibility of a shared pragmatic protocol. *Nutrition*. 74. https://doi.org/10.1016/j.nut.2020.110835.

Chen, S. X., & Cohen, P. R. (2018). The ginseng pimple: an inflammatory papule following ginseng consumption. *Dermatology Online Journal*. 24(9), https://doi.org/13030/qt7s87z6cc.

Hui L, Qiao-Ling, T, Ya-xi, S, L, Shi-bing, M, Yang, R, N, Liu, Jian-ping, (2020). Can chinese medicine be used for prevention of corona vírus disease 19 (COVID-19)? A review of historical classics, research evidence and current prevention programs. Chinese journal of integrative medicine. 26(4), https://doi.org/10.1007/s11655-020-3192-6.

Jin, Y. H., Cai, L., Cheng, Z. S., Cheng, H., Deng, T., Fan, Y. P., Fang, C., Huang, D., Huang, L. Q., Huang, Q., Han, Y., Hu, B., Hu, F., Li, B. H., Li, R., Liang, K., Lin, L. K., Luo, L. S., Ma, J., et al. (2020). A rapid advice guideline for the diagnosis and treatment of 2019 novel coronavirus (2019-nCoV) infected pneumonia (standart version). Military Medical Research. 7(4), 1-23. https://doi.org/10.1186/s40779-020-0233-6

Kakodkar, P., Kaka, N., Baing, M. N. (2020). A comprehensive literature review on the clinical presentation, and management of the pandemic coronavirus disease 2019 (COVID-19). Cureus. 12 (4), https://doi.org/10.7759/cureus.7560.

Li, Y., Liu, X., Guo, L., Li, J., Zhong, D., Zhang, Y., Clarke, M., & Jin, R. (2020). Traditional chinese herbal medicine for treating novel coronavirus (COVID-19) pneumonia: protocol for a systematic review and meta-analysis. 9(75), 1-6. article crd42020168004.

Ma, X., Bi, S., Wang, S., & Hu, S. (2019). Combined adjuvant effect of ginseng stem-leaf saponins and selenium on immune responses to a live bivalent vaccine of Newcastle disease virus and infectious bronchitis virus in chickens. Poultry Science. 98, 3548–3556, http://dx.doi.org/10.3382/ps/pez207.

Meng, L., Hua, F., Bian, Z. (2020). Coronavirus Disease 2019 (COVID-19): Emerging and Future Challenges for Dental and Oral Medicine. Journal of Dental Research. 12, https://doi.org/10.1177/0022034520914246

Mousa Haider Abdul-Lateef. (2020) Prevention and Treatment of Influenza, Influenza-Like Illness, and Common Cold by Herbal, Complementary, and Natural Therapies. Journal of Evidence-Based Complementary & Alternative Medicine. 22(1), 166-174, https://doi.org/10.1177/2156587216641831.

Pereira, A. S., et al (2018). *Methodology of cientific research*. [*e-Book*]. Santa Maria City. UAB / NTE / UFSM Editors. Available at https://repositorio.ufsm.br/bitstream/handle/1/15824/Lic_Computacao_Metodologia-Pesquisa-Cientifica.pdf?sequence=1.

Rasmussen, S. A., Smulian, J. C., Lednick, J. A., Wen, T. S., Jamieson, D. J. (2020). Coronavirus Disease 2019 (COVID-19) and pregnancy: what obstetricians need to know. American Journal of Obstetrics & Gynecology, https://doi.org/10.1016/j.ajog.2020.02.017.

Rothan, H. A., Byrareddy, S. (2020). The epidemiology and pathogenesis of coronavirus disease (COVID-19) outbreak. Journal of Autoimmunity. 109, https://doi.org/10.1016/j.jaut.2020.102433.

Singhal, T. (2020). A Review of Coronavirus Disease-2019 (COVID-19). The Indian Journal of Pediatrics. 87(4), 281–286, https://doi.org//10.1007/s12098-020-03263-6

Song, S. Y., Park, D. H., Seo, S. W., Park, K. M., Bae, C. S., Son, H. S., Kim, H. G., Lee, J. H., Yoon, G., Shim, J. H., Im, E., Rhee, S. H., Yoon, I. S., Cho, S. S. (2019). Effects of Harvest Time on Phytochemical Constituents and Biological Activities of Panax ginseng Berry Extracts. Molecules. 24 (18), 3343 https://doi.org/10.3390/molecules24183343.

Sohrabi, C., Alsafi, Z. N. N., Khan, M., Kerwan, A., Al-Jadir, A., Ioslfidis, C., Agha, R. (2020). Word Healt Organization declares global Emergency: A review of the 2019 Novel corovarius (COVID-19). International Journal Of Surgery. 76, 71-76, https://doi.org/10.1016/j.ijsu.2020.02.034.

Szczuka, D., Nowak, A., Szyda-Zaklos, M., Kochan, E., Szymasnska, M. I., Blasiak, J. (2019). American Ginseng (Panax quinquefolium L.) as a Source of Bioactive Phytochemicals with Pro-Health Properties. 11(5), https://doi.org/10.3390/nu11051041.

Tian, S. H., Weidong, N. L., Liu, H., Xu, H., Xiao, S. Y. (2020). Pulmonary Pathology of Early-Phase 2019 Novel Coronavirus (COVID-19) Pneumonia in Two Patients With Lung Cancer. Journal of Thoracic Oncology, 15(5), 700-704, http://dx.doi.org/10.1016/j.jtho.2020.02.010.

Vankadari, N., Wilce, J. A. (2020). Emerging WuHan (COVID-19) coronavirus: glycan shield and structure prediction of spike glycoprotein and its interaction with human CD26. Emerging Microbes & Infections. 9, https://doi.org/10.1080/22221751.2020.1739565

Yang, Y., Islam, M. S., Wang, J., Li, Y., Chen, X. (2020). Traditional chinese medicine in the treatment of patients infected with 2019-new coronavirus (SARS-Cov-2): A review and perspective. International journal of biological scienses. 16(10), 1708-1717. https://doi.org/10.7150/ijbs.45538.

Yu, S., Wang, J., Shen, H. (2020). Network pharmacology-based analysis of the role of traditional Chinese herbal medicines in the treatment of COVID-19. Ann Palliat Med. 9(2), 437-446, http://dx.doi.org/10.21037/apm.2020.03.27.

Zhang, D. H., Wu, K. L., Zhang, X., Deng, S. Q., Peng, B. In silico screening of Chinese herbal medicines with the potential to directly inhibit 2019 novel coronavirus. Journal of Integrative Medicine. https://doi.org/10.1016/j.joim.2020.02.005

Percentage of contribution of each author in the manuscript

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