

Efren Alba, Daislan Smith, Livia Tenorio Dr. Victor Urrutia Baca, Dra. Jany Jimenez del Valle

RESUMEN

Throughout history, human beings have taken refuge in the use of plants to relieve aches and pains. Currently, there is an inclination toward natural medicine because human beings has experienced the side effects of pharmacological drugs. This research will try to verify if there is an antibacterial effect of Allium sativum L. against the most common oral bacteria such as Aggregatibacter actinomycetemcomitans, Porphyromonas gingivalis, and Fusobacterium nucleatum. The microtiter method was implemented where antibiotics and antiseptic ampicillin, cloranfenicol, and chlorhexidine were used as positive controls against the extract of allium sativum (garlic).

We found that Allium sativum showed a significant inhibition percentage against three baccterias.

METODOLOGIA

• First, the garlic extract was obtained through the aqueous fraction method and the bacteria were cultured for 24 hours.







• In the process of determining the minimum inhibitory concentration, the microdilution method in a 96-well plate was used, and 10 different concentrations of the aqueous extract of Allium Sativum were made. 10 concentrations were tripled for the extract and the control PBS solution. 10 concentrations each for ampicillin, chloramphenicol, and chlorhexidine.



• After which 5 ml of bacteria were added to each well, and incubated for 24 hrs.





EFFICACY OF ALLIUM SATIVUM L AS AN ANTIBACTERIAL TREATMENT AGAINST PORPHYROMONAS GINGIVALIS, AGGREGATIBACTER ACTINOMICETEMCOMITANS, **AND FUSOBACTERIUM NUCLEATUM**

OBJETIVO

To determine the degree of antibacterial effect of the extract of Allium sativum L on bacteria Aggregatibacter actinomycetemcomitans, Porphyromonas gingivalis, and Fusobacterium nucleatum.



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Against the bacteria Porphyromonas gingivalis, garlic reaches the same inhibitory effect as chloramphenicol, increased the second in concentration, although less than chloramphenicol, but it exceeds the inhibitory effects of ampicillin, chloramphenicol and chlorhexidine, third concentration from the onwards.



efrenalba@hotmail.com daislan.michael27@gmail.com liviat0429@gmail.com

The medical and dental field faces the challenges of antimicrobial resistance, a product of the prolonged use of antimicrobials and their abuse by the general population. (1)

There is an inclination toward natural medicine because human beings has experienced the side effects of pharmacological drugs. In the dental field, the use of plants has been explored to relieve certain dental discomforts, such as inflammation of the gums and canker sores, and it has been proven that many plant extracts are equally effective in relieving these ailments. (2)

Allium sativum L., also known as garlic, offers a variety of bioactive and biofunctional components. They offer a broad spectrum of antibacterial and antifungal properties.(3)

RESULTADOS

Against the bacterium Aggregatibacter actinomycetemcomitans, garlic extract showed a significantly equal effect compared to ampicillin, chloramphenicol, and chlorhexidine in almost all the concentrations.

the Fusobacterium Against nucleatum bacteria, from the initial concentration garlic does not have an inhibitory effect compared to ampicillin, chloramphenicol, and chlorhexidine, but it increases and reaches a threshold in the second concentration.

Allium Sativum presented antibacterial efficacy, with a minimum percentage of bacterial inhibition of 80% ± and a maximum of 99% ±. Regarding the minimum inhibitory concentration, it is considered that Allium Sativum showed an inhibitory effect of 99%. Allium sativum increases a minimum inhibitory concentration of 1.95 mg/ml against all three bacteria.

RECOMENDACIONES

Further studies are needed to investigate the mechanism of action of allicin as an antibiotic, as studies have suggested that allicin is the most important pharmacologically active substance found in Allium sativum with important antibiotic properties. Studies are also needed to increase the stability of allicin so that the antibiotic properties can be stabilized for a significant period of time in the oral cavity like that of chlorhexidine if it is to be used as a possible therapeutic option as an antimicrobial substance in the field of dentistry.



INTRODUCCION

CONCLUSION



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REFERENCIAS Y LIGAS

BIBLIOGRAFIA

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