

Documents

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Anti-microbial Activities of Syzigium cumini leaves against Periodontopathic Bacteria (Porphyromonas gingivalis) [Actividades antimicrobianas de las hojas de Syzigium cumini contra bacterias periodontopáticas (Porphyromonas gingivalis)]
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Abstract
Introduction: Syzigium cumini has been known to have an anti-microbial effect and is traditionally used as medicine for some human diseases. However, only a few studies were done on water extracts of these leaves. This study aimed to elucidate the minimum inhibition concentration (MIC) and minimum bactericidal concentration (MBC) of water extract of Syzigium cumini leaves against Porphyromonas gingivalis that represent periodontopathic bacteria. Methods: S. cumini leaves were collected from local farms. The leaves were washed and dried. Water extraction was performed to collect the compound, then was diluted into concentrations of 1 %, 2.5 %, 5 %, 7.5, 10 %, 12.5 %, 15 %, and 20 %. The bacteria were grown in triplicates agar blood and then put in the anaerobic jar to incubate for 48 hours at 370C. Disc Diffusion test, MIC, and MBC were performed. Result: The anti-microbial disc diffusion test of S. cumini extract against P. gingivalis indicated by the presence of a 6.9 ± 0.14 mm clear area around the extract starting at a concentration of 7.5 %, and 13.6±0.32 mm at a concentration 20 %. The minimum inhibition concentration of S. cumini was 0.156 %. The clear sight starting from the 6th well indicates that there was no growth of bacteria. After incubation for 2x24 hours, there was no growth of bacteria on the agar blood with a 2.5 % concentration of S. cumini extract. Conclusion: Aqueous extract of S. cumini leaves has an anti-microbial potential effect against Periodontopathic bacteria which was represented by Porphyromonas gingivalis. Further research on Syzigium cumini leaves at the molecular level is advisable. © 2023 National Academy of Medicine. All rights reserved.

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Human diseases; Porphyromonas gingivalis; Syzigium cumini
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