

Novel Drug Delivery Systems of *Mimusops Elengi* in Therapeutic Management of Periodontal and Oral Infections

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Published October 20, 2022

ABSTRACT

Mimusopselengi Linn commonly known as Spanish cherry is widely distributed throughout India. *M. elengi* is well documented for several medicinal properties. Bark of *M. elengi* contains tannin, some caoutchouc, wax, coloring matter, starch, ash forming inorganic salts, saponin, taraxerone, taraxerol, spinasterol, sodium ursolate and betulinic acid. The bark of *M. elengi* is an important ingredient for the ayurvedic formulations used as tooth powder. Dried and powdered bark of *M. elengi* was extracted with various solvents for evaluation of antibacterial activity against Gram-positive and Gram-negative bacteria and other microorganisms isolated from tooth-tartar of dental patients.

Considering its proven properties, my present research aims at evaluating the efficacy of specially formulated Suture coating gel, local drug delivery and mouthwash from the bark extract of *Mimusopselengi* and its effect in preventing bacterial colonization, oral biofilm and in treatment of chronic periodontitis. The suture coating gel was formulated to prevent the surgical site infections after periodontal flap surgery and oral surgical procedures. Local drug delivery was formulated in the injectable consistency for periodontal pockets followed by placement of periodontal pack. Mouthwash was formulated for the treatment of gingivitis and the study showed effective results. Therefore, the bark extract of *Mimusopselengi* can be very effective as Suture coating gel, Local drug delivery and Mouthwash. These are the ongoing research however; further studies are required to prove the effectiveness of the material.

Future corporate scope: It can be an emerging option in treating gingivitis, plaque control, periodontal pockets and surgical site infections owing to no side effects. It can be a pocket- friendly option for consumers than other commercially available mouthwashes and local drugs if marketed by some reputed firm.

Keywords: Novel drug delivery systems, Suture coating gel, Local drug delivery, Mouthwash

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Citation: Salve A & Ansari S. (2022) Novel Drug Delivery Systems of *Mimusops Elengi* in Therapeutic Management of Periodontal and Oral Infections. J Oral Health Dent, 5(S1): 01.

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