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Spilanthes acmella on Periodontal Surgeries

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One of the primary concerns following periodontal surgeries is the exposure of denuded bone and open wounds that are intended to heal by secondary intention. During the healing phase, patients may experience significant pain and discomfort. It is essential to regularly rinse the wound to prevent infection while also taking care to avoid any trauma to the exposed area (1, 2). Proper management during this period is crucial for promoting optimal healing and minimizing complications.

Periodontal dressings aid in the healing process by protecting the tissue, helping to promote recovery by preventing surface trauma during chewing, and shielding the patient from pain caused by direct contact with the wound (3). However, overextension of the periodontal dressing, dimensional changes, plaque accumulation beneath its surface, and cytotoxic effects on the underlying tissue due to prolonged use can hinder the healing process and lead to pain and discomfort (4).

Spilanthes acmella, commonly known as the toothache plant, is a flowering herbaceous plant belonging to the Asteraceae family (5). This plant is renowned for its rapid onset and pronounced local anesthetic properties, attributed to the analgesic effects of *Spilanthes*, an alkylamide (5-7). *Spilanthes acmella* has demonstrated significant antibacterial and antifungal activity against common oral pathogens, including *Enterococcus faecalis*, *Lactobacillus*, *Streptococcus*, *Eikenella* strains, and *Candida albicans* (8, 9).

In addition to its antibacterial and antifungal properties, *S. acmella* exhibits antipyretic, anti-inflammatory, diuretic, antinociceptive, vasorelaxant, and anticonvulsant effects (10). Previous studies on this natural substance have shown that the use of its leaves, flowers, flower heads, and roots can be effectively utilized in natural formulations for the treatment of toothache, periodontal disease, and recurrent aphthous ulcers (11). The oral and mucosal effects of this natural substance, along with its analgesic, astringent, antibacterial, and antifungal properties, may contribute to the accelerated healing of periodontal wounds (11).

The beneficial effects of this natural herbal substance present exciting opportunities for developing new formulations in dental care. Potential applications include toothpastes, periodontal dressings, nano-formulations of mucoadhesives, mouthwashes, and intracanal medicaments. In periodontal surgeries, a mucoadhesive formulation of *S. acmella* could be utilized as a periodontal dressing to enhance the characteristics of conventional periodontal dressings. Additionally, a mouthwash containing this herbal substance may aid in post-operative care. Developing new formulations based on this plant material could lead to an effective natural product that addresses complications such as pain, infection, and delays in the healing process following periodontal surgeries.

Footnotes

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