In the recent years, there has been an increased interest toward the essential oils. These are secondary metabolites produced by various medicinal plants and possess antibacterial, antifungal, and antioxidant properties. Number of studies has been done to prove the therapeutic properties of various essential oils, but very few has been published on their use in dentistry. Following are the possible uses of essential oils in dentistry:

1. Oral hygiene adjunct - Essential oil rinses are found to be equally effective in inhibiting plaque. A study carried out by Pizzo et al. on plaque inhibitory effect of amine fluoride/stannous fluoride and essential oils showed no significant difference in efficacy of both. As chlorhexidine causes staining of teeth on long term use, essential oils can be used as an alternative to chlorhexidine rinse. Essential oils have shown to possess antimicrobial activity against subgingival periopathogens too. However, a study done on efficacy of essential oil with and without presence of ethanol concluded that essential oils alone are not very effective.

2. Anxiolytic - Aroma of lavender essential oils is capable of altering emotional states and reducing mild anxiety. It has been reported to be useful in reducing anxiety in dental patients when used in waiting area. It also reduce the pain of needle insertion. Use of aromatherapy with natural essential oil of orange has been shown to reduce salivary cortisol and pulse rate due to child anxiety state.

3. Wound dressing - According to the study done by Budzyńska et al., better therapeutic effects can be achieved from the wound dressings containing essential oils. Activity was found to be more when stored at 4°C for 7 days. Therefore, they can be used to achieve better healing after oral surgical procedures.

4. In dental implants - Hence many essential oils have been shown to possess antibiofilm activity. They can be used with dental implants. Treatment of dental implant material surfaces with essential oils has shown to inhibit biofilm production.

5. As preservative - Essentials oils showed higher inhibitory activity against tested microorganism strain than extracts and methylparaben. The study by Herman et al. suggest use of essential oils as substitute of methyl paraben in cosmetic emulsions. Similarly, it can be used to replace methylparaben, which is used as preservative in various dental products, especially in patients allergic to it. It can be used in LA allergy, but this requires further clinical trials to detect its efficacy as preservative and whether it can be injected in human body or not; as to the best of our knowledge until now any study has not been done in which essential oils are injected in human body.

All these are possible therapeutic benefits of essential oils, but there implication in day-to-day practice requires further research and clinical trials to rule out side-effects. If used properly they may prove very beneficial in dental treatments.

References