ABSTRACT

TITLE: A randomized clinical trial to evaluate the efficacy of Arimedadi oil pulling in plaque induced gingivitis, and its effect on metabolic marker in gingival crevicular fluid.

BACKGROUND: In the oral cavity, plaque forms biofilm/pellicle over the tooth surface, that harbours numerous microorganism. These microorganisms cause inflammation of the gingiva, which is termed as gingivitis. The changes noticed are red, swollen, spongy and bleeding gums. No studies till date have taken place to scientifically prove the efficacy of kabala (medicated oil pulling) in periodontal conditions. Arimedadi tailam, classical ayurvedic formulation is indicated in mukha rogas (diseases of face and oral cavity) in general and specific, oral conditions, danta vidradhi (alveolar abscess), seetada (spongy or bleeding gums), dantaharsha (odontitis), krimidanta (caries), dalana (tooth ache) and the like.

AIM: To evaluate the efficacy of Arimedadi oil pulling (which is a medicated oil containing Ayurvedic medicaments) in plaque induced gingivitis and to assess the clinical and biochemical changes that take place. The patients are randomly selected. Clinical and biochemical parameters are assessed at baseline, II week and IV week.

MATERIALS AND METHODS: Twenty nine patients who were diagnosed with gingivitis were advised to practice Oil pulling therapy or Chlorhexidine rinsing or Placebo mouthrinising containing mint flavored distilled water for a period of 30 days. The baseline and post-intervention (II week and IV week) - Gingival Index, Plaque Index, Modified Sulcular Bleeding Index and GCF PGE$_2$ levels were assessed to quantify the statistical difference between these two groups.
RESULTS: Significant reduction was observed between the baseline and post-intervention (II week and IV week) Gingival Index, Plaque Index, Bleeding scores and GCF PGE2 levels in the chlorhexidine group and Oil pulling group. However, this reduction was greater in Chlorhexidine group than oil pulling group. Overall from baseline to II week and IV week, when the reduction in PII, GI, BOP and GCF PGE₂ values were compared for the CHX and Oil pulling groups, the difference was statistically significant (P=0).

CONCLUSION: The anti-plaque and anti-gingivitis activity of CHX was superior to Arimedadi Taila, though there was significant reduction observed in both groups. Overall, from baseline to II week and IV week, when the reduction in PII, GI, BOP and GCF PGE₂ values were compared for the CHX and Oil pulling groups, the difference was statistically significant (P=0). In the Placebo group there was no anti-plaque and anti-gingivitis activity, which was in contrast to CHX and Oil pulling group. The present study results showed that PGE₂ levels in GCF were found to be more sensitive to changes in gingival inflammation.