

Efficacy of aloe vera gel topical application on radiation induced mucositis in head and neck malignancy: a double-blind, randomized clinical trial

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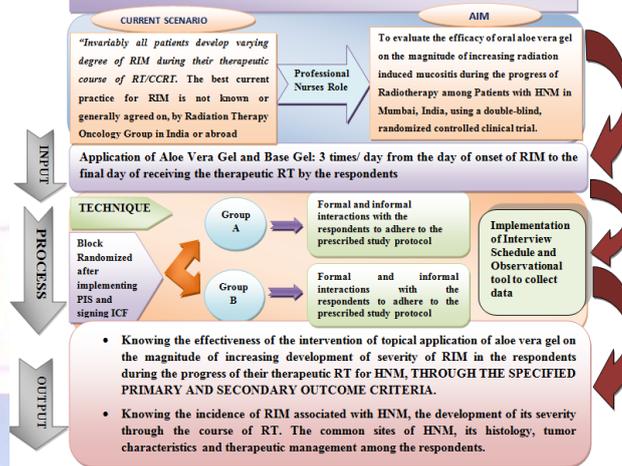
Abstract

Radiotherapy, (RT) a vital modality of treatment in patients with head and neck malignancy (HNM) is associated with high rates of muco-toxicity with no consensus/universal standard of its care. Aloe-vera is FDA approved and is therapeutically used. Studies to-date has had different dimensions. In one study, the researcher Puataweepong *et al.*, 2010 used aloe-vera as a mouth-wash where its effect got limited over a few minutes and in the other research, the researcher Su *et al.*, 2004, used it in oral form where it acted as a systemic agent than a local agent. Precisely, the paucity of robust studies on the potential effects of aloe-vera on RIM and its use in the form of an oral gel is a significant omission. The objective of writing this paper is to discuss the effectiveness of oral aloe-vera-gel in reducing the magnitude of increasing RIM during the progress of RT in HNM patients using a double-blind, randomized controlled trial. An evaluative, pre-experimental double-blind, control group design was adopted. Hundred eligible respondents with HNM scheduled to receive conventional RT were block randomized between Group A and Group B group and PIS implemented. Consent was taken. Standardized tools were applied to assess the primary outcome and secondary outcome. Respondents in experimental (Group A) and control groups (Group B) were statistically identical in baseline characteristics ($P>0.05$). The RIM grades were significantly less for experimental group as compared to that for control group ($P<0.05$). By the end of treatment, the two groups were statistically different in maximal grade of toxicity ($Z=1.7$, $P<0.05$), use of drugs, QOL scores, percentage of weight loss and nutritional status. Oral aloe-vera gel was beneficial in reducing the magnitude of increasing RIM without side effects.

Image

FIGURE 5: CONCEPTUAL FRAME WORK: SYSTEMS THEORY

A randomized double blind clinical trial to assess the effectiveness of topical application of Aloe Vera gel versus base gel on radiation-induced mucositis in patients receiving radiation therapy for Head and Neck Malignancy in a selected hospital in Mumbai



Recent Publications

1. Puataweepong P, Dhanachai M, et al. (2009) The efficacy of oral Aloe-vera juice for RIM in head and neck cancer patients: a double-blind placebo-controlled study. *Asian Biomedicine*. 2009(3): 375-382.
2. Su C K, Mehta V, et al. (2010) Phase-II double-blind randomized study comparing oral aloe-vera versus placebo to prevent radiation-related mucositis in patients with head-and-neck neoplasms. *Int. J. Radiation Oncology. Biol. Phys.*, 60(1): 171-177.
3. Ahmadi A (2012) Potential prevention: aloe vera mouthwash may reduce radiation-induced oral mucositis in HNM patients. *Chinese Journal of Integrative Medicine*, 18(8): 635-640.
4. Grundmann O (2012) Aloe vera gel research review- an overview of its clinical and proposed mechanism of action. *Natural Medicine Journal*. 4(9):
5. Sutherland SE, Browman GP (2001) Prophylaxis of oral mucositis in irradiated head-and-neck cancer patients: a proposed classification scheme of interventions and meta-analysis of randomized controlled trials. *Int J. Radiat Oncol Biol Phys*. 49: 917-30.



Biography

Rita Lakhani is working as the Principal of Fortis Institute of Nursing, Mumbai. She has notable national awards to her credit and has published articles in VHL Repository and in various national journals. The present Doctoral research opens a new pathway for improving health care related to oral mucositis that is radiation-induced. She has been appointed as Prospective Author by TNAI to update a chapter in their prestigious book titled "*History and Trends in Nursing in India*". She was the Research Guide to two Canadian students during their internship studies in India. One of her researches was selected for poster presentation (Video clip) at the 22nd Canadian Conference on Global Health in Montreal. She received the 1st Prize in teacher's category amongst all faculties at MUHS for research presentation during Avishkar Convention-2010 & 2015. She is the Vice-President of ONAI and Editorial Board Member of its journal.

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