S.N.Nagabhishek et al., J Cancer Sci Ther 2015, 7:10
http://dx.doi.org/10.4172/1948-5956.C1.055

OMICS International
conferenceseries.com

9th Indo Global Summit on
Cancer Therapy
November 02-04, 2015 Hyderabad, India

Anti-Inflammatory activity of geranial against 4nqo induced oral carcinogenesis in rats

S.N.Nagabhishek[1]*, A. Madankumar[1,2], T.Devaki[2]
[1]Sathyabama University,India
[2] University of Madras,India

Oral cancer is one of the major global threats to public health, 5% of all tumors occur in the head and neck, and approximately half of those occur specifically in the oral cavity and is mostly seen in men than in women. Geranoil is a colourless oily liquid, acyclic monoterpene alcohol, which is a natural antioxidant and is also known for its anticancer activity. The objective of this study was to check the effective anti-inflammatory role of geraniol against 4nqo induced oral carcinogenesis in male Wistar rats. 4-Nitroquinoline-1-oxide (4nqo) is a quinoline derivative and carcinogenic compound. Initially the test animals were administrated on 4nqo (50ppm) that induced tongue cancer about 20 weeks. Immuno blot and fluorescence analysis of tumour necrosis factor-α (TNf-α), nuclear factor kappa-B (NFkB), interleukin-1β (IL-1β), and Inducible nitric oxide synthase (iNOS) were done. Haematological parameters were carried out in blood. Finally histochemical analysis of immature and mature mast cells was done by toulidine blue staining and Alcian blue-safranine staining respectively to confirm the effect of 4nqo in cancer bearing animals and geraniol 200mg/kg b.w. treatment. The abnormal changes in the Haematological parameters followed by Mature and Immature mast cells accumulation were absorbed in cancer bearing rat toung tissue with western blotting analysis divulge increased protein expressions of TNf-α, NFk-B, IL-1β and iNOS. These abnormal changes were reduced in geraniol treated rats compared to cancer bearing rats. Based on this present study, obtained results strongly suggest the anti-inflammatory effect of geraniol against 4-Nitroquinoline-1-oxide induced oral carcinogenesis in rats.

Biography

S.N. Nagabhishek is currently a Junior Research Fellow under Dr.A.Madankumar who is working as Scientist at Cancer biology lab, Molecular and Nanomedicine Research unit, Sathyabama University, Chennai.

nagabhishek.nat@gmail.com

Notes: