

Evaluation of anti-oxidant properties of a traditional formulae (*JB Kalka*)

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Abstract

Cancer is a group of diseases involving abnormal cell growth with the potential to invade to other parts of the body. In Ayurveda, cancer is defined in the term *Arbuda*, which is categorized by big, deep seated, immovable, round, slightly painful and slowly increasing *Arbuda* which is caused by penetration of increased *Doshas* into the body tissues and blood. In 2012, about 14.1 million new cases of cancer were reported globally and it caused 8.2 million or 14.6% of deaths. Though there are several advanced treatment strategies available in the management of cancer in modern medical system, most of them cause lots of side effects. But *JB Kalka* is a traditional preparation which is being successfully practiced by *Kottayawatta* generation in the management of cancer without any side effects. This formula was selected to demonstrate literature review of its all ingredients and to evaluate its anti-oxidant properties and physicochemical parameters. The *JB Kalka* was prepared according to the guidelines indicated by the traditional practitioners. The literature review of all ingredients was compiled from Ayurvedic classical texts, electronic databases of Google scholar, PubMed and through web search. As per literature review, *JB Kalka* has properties of *Katu- Thiktha- Kasaya Rasa*, *Laghu- Theekshana Guna*, *Ushna Veerya* and *Katu Vipaka* which regulate *Thridoshas* by pacifying *Kapha* and *Vata* and increasing *Pitta*. This study shows an anti-oxidant properties of *JB kalka* according to DPPH method by colour change from purple into pale yellow. According to the quantitative test, methanolic extract of *JB Kalka* exhibited highest potential for DPPH radical scavenging activity as it had the least IC50 value of around 1.25 mg/ml. Therefore, *JB Kalka* is an effective medicinal preparation to be used in the treatment of cancer as an anti-cancer drug. But further studies with large sample should be carried out to scientifically justify the effectiveness of *JB Kalka* in the management of cancer and to identify an immune modulatory, cyto toxic and anti-cancer properties of *JB Kalka*.

Keywords: *Arbuda*, *JB Kalka*, DPPH method

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