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Study of the antioxidant activity of a traditional herbal oil used for cancer therapy in Sri Lanka.

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In Asian countries like Sri Lanka and India, there are well-developed traditional medical systems, which use various herbal preparations to treat cancer. These herbal formulations are prepared using a mixture of plant material according to traditional formulas. The therapeutic benefit of these medicinal preparations is often attributed to their antioxidant properties. Many antioxidant compounds, naturally occurring in plant sources have been identified as free radicals or active oxygen scavengers those of which play a significant role in prevention and cure of cancer through elimination of carcinogens from the system. It has been shown that phenolic substances present in plants have major contribution for antioxidant activity.

The objective of this study was to investigate the antioxidant activity of a traditional herbal oil which is called ‘pranajeewa’ which is used in certain types of cancer and other diseases in traditional medicine of Sri Lanka. Antioxidant activity of the oil was investigated by 1,1-diphenyl-2-picrylhydrazyl (DPPH) radical scavenging method, reducing the power and anti lipid peroxidation activity (TBARS assay). These values were compared with ascorbic acid and vitamin E. The phenol content was investigated by Folin-Ciocalteu method. The polyphenol content of the oil was 0.29 ± 0.09 % w/w gallic acid equivalents. The EC₅₀ value for DPPH radical scavenging activity of the oil was 79.84 ± 5.35 μ l/ml. The EC₅₀ value for TBARS assay of the oil was 19.24 ± 0.52 μ l/ml.

The above findings indicate that ‘pranajeewa’ oil has free radical scavenging activity and lipid peroxidation activity, however the antioxidant properties are lower than ascorbic acid vitamin E.

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