Nutraceuticals as new treatment approaches for oral cancer: II. Green tea extracts and resveratrol.

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Source

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Abstract

Nutraceuticals with anti-neoplastic potential are suitable candidates for extending the range of therapeutic options for several types of cancers. One of these malignancies is oral cancer of the squamous cell carcinoma type, for which current treatment approaches have not succeeded in improving long-term clinical outcome. We recently reviewed the beneficial effects of curcumin for the treatment of oral cancer. In the current review, we focused on the beneficial effects of other two nutraceuticals, green tea extracts [especially (-)-epigallocatechin-3-gallate (EGCG)] and resveratrol, in the treatment of oral cancer. In vivo and in vitro studies as well as clinical trials were reviewed, focusing on the beneficial effect of each of these plant-derived dietary agents, either alone or in combination with various pharmacological agents. We also presented the anti-cancer effects against cancer cells and against components of the tumor microenvironment. It emerged that the poor bioavailability of these nutraceuticals poses an obstacle to their exerting adequate anti-cancer potential. Ground-breaking studies employing new nanotechnology-based therapeutic approaches were presented.

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