

The relationship between metronidazole concentration and clinicopathological parameters in patients with colon cancer: A pilot study

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ABSTRACT

Purpose: To evaluate the concentration of metronidazole (MTZ) and its hydroxy metabolite (MTZOH) in cancer tissue and adjacent normal tissue in colorectal cancer patients in correlation with clinicopathologic parameters.

Material and methods: MTZ and MTZOH concentration were measured in tumor tissue and surrounding healthy tissue by LC-ESI-MS-MS method.

Results: We found different concentration of MTZ and MTZOH in colorectal cancer and healthy tissue, however the results were not statistically significant. MTZ concentration was elevated in

tumors located in rectum, in patients over 60 years old, in patients without metastases to regional lymph nodes (N0) while decreasing with increasing tumor size. Women accumulated greater amounts of MTZ in comparison to men.

Conclusion: Comparison of the concentration of the drug and its metabolite in tumor and normal colon tissue shows its different reaction to MTZ. MTZ concentration in the tumor and normal colon tissue is sex-dependent.

Key words: Metronidazole, hydroxy metabolite, colorectal cancer, colon healthy tissue
