Re: Carvedilol Efficiently Protects Kidneys without Affecting the Antitumor Efficacy of Cisplatin in Mice

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Abstract available at http://jurology.com/

Editorial Comment: It is estimated that 25% to 35% of patients experience a significant decline in renal function after receiving a single dose of cisplatin. Therefore, minimization of this side effect is essential to improve the effectiveness of cisplatin chemotherapy and patient quality of life. Ideally cytoprotective measures should reduce the toxicity of cisplatin on normal tissue without decreasing its efficacy as an antitumor agent or causing additional side effects. The protective effect of carvedilol against cisplatin induced nephrotoxicity in tumor-free rats was recently demonstrated. Carvedilol is a third generation beta-blocker already clinically used to treat patients with congestive heart failure and mild to moderate hypertension. Its strong antioxidant activity is not shared by other beta-blockers, and it has been attributed to the presence of a carbazole moiety in the molecule.

The authors evaluated the nephroprotection of carvedilol as well as its effects on the antitumor activity of cisplatin administered to tumor bearing mice. The study showed evidence of the nephroprotective potential of carvedilol in tumor bearing animals. The protection of carvedilol is associated with its antioxidant mechanism, which does not impair the antitumor activity of cisplatin. Carvedilol has the advantage of being a safe and well tolerated drug already used in clinical practice. Therefore, carvedilol is a promising candidate for adjuvant therapy in patients with cancer treated with cisplatin.

Anthony Atala, MD

Suggested Reading


Re: Dietary Sources of N-Nitroso Compounds and Bladder Cancer Risk: Findings from the Los Angeles Bladder Cancer Study

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Abstract available at http://jurology.com/

Editorial Comment: The role of diet in bladder cancer is only partially understood. Diets high in meats, especially processed meats, as well as those high in fat and intake of artificial sweeteners have been implicated as risk factors for bladder cancer, although the results are inconclusive. N-nitroso compounds (NOCs) have been proposed as possible bladder carcinogens. In particular, the NOC dibutylnitrosamine is metabolized in the liver and passes through the bladder, where its metabolites can be absorbed and activated in the bladder mucosa. These metabolites have been demonstrated to induce bladder tumors in mice and rats. The main sources of exogenous exposure to N-nitroso compounds are cigarette smoke and diet, particularly processed meats (eg cold cuts, sausage and bacon) when nitrate or nitrite salts are added during processing. A proportion of these ingested preformed N-nitroso compounds may reach the lumen of the bladder, where they could directly exert.
a carcinogenic effect on urothelial cells. N-nitroso compounds can also form endogenously in or near the bladder when secondary amines undergo nitrosation by nitrite. Endogenously formed N-nitroso compounds have been estimated to account for 45% to 75% of total N-nitroso compound exposure.

This study demonstrated that intake of liver and salami, pastrami or corned beef can be associated with an increased risk of bladder cancer. The results of this study are consistent with a role of dietary sources of NOC precursors and preformed NOCs from processed meats in bladder cancer risk, suggesting consumption of meats with high nitrate/nitrite, high amine and heme content as a risk factor for bladder cancer. The findings support a role for endogenous nitrosation as a potential risk factor for bladder cancer, particularly among nonsmokers.

Suggested Reading


Urolithiasis/Endourology

Re: Persistence of 1,25D-Induced Hypercalciuria in Alendronate Treated Genetic Hypercalciuric Stone-Forming Rats Fed a Low Calcium Diet

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Abstract available at http://jurology.com/

Editorial Comment: This group has been using this model for years to elucidate some of the mechanisms associated with hypercalciuria. While these rats did not optimally benefit from alendronate from a bone perspective, there have been recent reports of this agent reducing calcium excretion and improving bone health in patients with hypercalciuria and decreased bone density. This response is augmented by the coadministration of a thiazide diuretic.

Suggested Reading


Geriatrics

Re: Effect of Melatonin on Chronic Bladder-Ischaemia-Associated Changes in Rat Bladder Function

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