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(Askandar Tjokroprawiro)

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Contralateral Renal Fibroblast and Tubular Cell Apoptosis and Proliferation in Artificial Unilateral Total Urethral Obstruction in Rabbits

Contralateral Renal Fibroblast and Tubular Cell Apoptosis and Proliferation in Artificial Unilateral Total Urethral Obstruction in Rabbits

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Abstract

We defined total unilateral obstruction influence on apoptosis and proliferation of renal tubular cells and fibroblasts in contralateral kidney in rabbits. This study used post control group design of 40 rabbits that were divided randomly into 4 groups. Group I received total unilateral ligation of ureter for 7 days and nephrectomy of contralateral kidneys and we found apoptosis (with 'apoptTag') in renal tubular cells. Using HE staining, we found proliferation of tubular cells and fibroblasts. Group II was treated similarly for 14 days. Group III & IV were controls for 7 and 14 days. The results showed that apoptosis proportion of tubular cells in contralateral kidneys was not significantly different from those in control groups for 7 days ($p > 0.05$), but significantly different from those treated for 14 days ($p < 0.05$). The proportion of apoptosis of tubular cells in contralateral kidneys was not significantly different between that in 7 days and 14 days ($p > 0.05$). The proliferation of tubular cells and fibroblasts in contralateral kidneys was significantly different than that in control groups for 7 and 14 days ($p < 0.05$), and also different in contralateral kidneys in 7 days as compared to that in 14 days ($p < 0.05$). In conclusion, apoptosis of tubular cells in contralateral kidneys is significantly different than that in controls of 14 days treatment. The proliferation of tubular cells and fibroblasts in contralateral obstruction is significantly different in 7 and 14 days than controls.

Keyword : apoptosis, proliferation, contralateral, urethral, obstruction, ,

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