

Perbedaan ekspresi TGF- β 1 dan fibrosis interstisial pada kejadian nefrotoksis doxorubicin dan nefroprotektif pentoxifylin

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Abstrak

Nephrotoxic effects of Doxorubicin (DXR) is still a problem in clinical practice. On the other hand Pentoxifylline (PTX) as an electron-donor material can be nephroprotective. Therefore, combination of DXR and PTX would be expected to reduce nephrotoxic effects of DXR. In this study we examined the effects of PTX on TGF- β 1 expression and interstitial fibrosis in an experimental model of DXR nephropathy in mice. Mice were divided into three groups of eight each i.e. untreated Swiss mice (controls), DXR treatment alone to induce nephropathy, and DXR treatment followed by PTX. Following 4 week treatment, each group was sacrificed. Examination of TGF- β 1 expression was carried out by immunohistochemistry employing monoclonal antibody. Interstitial fibrosis examination was performed by a histopathologist using Verheoff van Giesen staining and the one way Anova was used for statistical analysis. It was observed that DXR treatment followed by PTX treatment prevented the increase of TGF- β 1 expression and interstitial fibrosis in mice with DXR nephropathy ($p < 0.05$). These findings suggested the beneficial nephroprotective effect of PTX.