Efek kombinasi lisinopril dan diltiazem sebagai antifibrosis pada peritoneum Tikus = Effect of combination lisinopril and diltiazem as antifibrosis in peritoneum of Rats

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Latar Belakang : Continous ambulatory peritoneal dialysis (CAPD) telah menjadi alternatif selain hemodialisis untuk pengobatan penyakit ginjal tahap akhir. Fibrosis peritoneum merupakan penyebab utama terjadinya kerusakan membran peritoneum. Mekanisme fibrosis peritoneum belum diketahui secara pasti, namun ditengarai transforming growth factor ? β (TGF ?β) berhubungan erat terhadap terjadinya fibrosis peritoneum.
Tujuan : Tujuan penelitian ini adalah untuk mengetahui pengaruh kombinasi ACE inhibitor (ACEI) dan calcium channel Blocker (CCB) terhadap penurunan ekspresi TGF ? β dan fibrosis peritoneum tikus jantan yang telah dilakukan CAPD.
Metode Penelitian : Penelitian eksperimental, post test only control group design. Tiga puluh tikus Dawley spraque dibagi menjadi lima kelompok yaitu kelompok kontrol (kelompok 1) dan kelompok perlakuan dengan pemberian masing-masing cairan CAPD 4,25% (kelompok2) lisinopril 1,44 mg oral dan CAPD (kelompok 3) diltiazem CD 6,48 mg oral dan CAPD (kelompok 4) lisinopril 1,44 mg dan diltiazem CD 6,48 mg oral dan CAPD (kelompok 5). Setelah 4 minggu tikus dikorbankan dengan cara dislokasi cervical kemudian diperiksa ekspresi TGF ? β dan terjadinya fibrosis pada peritoneum tikus, selanjutnya dibuat sediaan histopatologi dan diwarnai dengan hematoksilin eosin serta imunohistokimia menggunakan antihuman TGF-ß.
Hasil : Dua puluh peritoneum tikus berhasil diperiksa. Rerata skor TGF-β kelompok kontrol 1,8, kelompok CAPD 2, kelompok lisinopril dan CAPD 1,8, kelompok diltiazem CD dan CAPD 1,8, kelompok lisinopril dan diltiazem CD dan CAPD 1,7 (p=0,959). Rerata skor fibrosis peritoneum kelompok kontrol 1,1, kelompok CAPD 2,6, kelompok lisinopril dan CAPD 1,2, kelompok diltiazem CD dan CAPD 1,3, kelompok lisinopril dan diltiazem CD dan CAPD1,5 (p=0,268)
Simpulan : Kombinasi lisinopril dan diltiazem mempunyai kecenderungan menurunkan ekspresi TGF ? β lebih baik dibandingkan lisinopril maupun diltiazem yang diberikan secara terpisah tetapi tidak bermakna secara statistik. Kombinasi lisinopril dan diltiazem mempunyai kecenderungan mengurangi fibrosis peritoneum tetapi tidak bermakna secara statistik dan tidak lebih baik dibandingkan lisinopril maupun diltiazem bila diberikan secara terpisah.
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alternative other than hemodialysis for end stage kidney disease treatment.
Peritoneal fibrosis is the most serious cause of the damage in membrane
peritoneum. Mechanism of fibrosis peritoneum is not exactly known yet,
transforming growth factor ? β(TGF ? β) is closely related with the existence of
fibrosis peritoneum.
Purposes : The purpose of this study is to evaluate the effect of combination
between ACE inhibitor (ACEI) dan Calcium channel blocker (CCB) in reducing
expression of TGF ? β and fibrosis peritoneum in a male rat treated with CAPD.
Research Method : Experimental study, post test only control group design.
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TGF ? β and peritoneal fibrosis are conducted by histopatology with hematoxillineosin
staining and immunology with anti human-TGF-β.
Result : Twenty peritoneal of rats can be examined. Mean score TGF-β control
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