

The influence of angiotensin converting enzyme inhibitors and angiotensin receptor blockers on renal function in patients undergoing non-emergent coronary angiography

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Aim: a pilot study that aims to evaluate prospectively whether drugs that decrease AngII (ACE-I and ARBs) influence estimated GFR (eGFR) in patients undergoing non-emergent coronary angiography.

Patients and methods: Patients on chronic treatment of ACE-I/ ARBs' were recruited consecutively. The enrolled subjects were randomized into three groups at 1:1:1 ratio:

- A: ACE/ARB stopped 24 hours prior to the procedure and restarted immediately after the procedure.
- B: ACE/ARB stopped 24 hours prior to the procedure and restarted 24 hours after the procedure.
- C: ACE/ARB continued through out the hospitalization.

Plasma creatinine was measured and eGFR was calculated according to the modification of diet in renal disease equation, before the image study and 48h after the procedure.

Results: Groups A,B and C included 30, 31 and 33 patients respectively. The mean age didn't differ between the three groups 64.81 ± 13.82 , 61.03 ± 11.29 and 67.64 ± 9.02 respectively ($p=0.08$). The male/female distribution was equivalent 23/7, 21/9 and 18/14 respectively ($p=0.29$). The renal measurements creatinine/eGFR were comparable in the three groups before catheterization $1.0 \pm 0.40/79.8 \pm 27.8$, $0.9 \pm 0.4/82.9 \pm 26.0$ and $0.9 \pm 0.2/79.3 \pm 16.2$ respectively ($p=0.6/0.8$) and 48h after catheterization $1.0 \pm 0.3/82.1 \pm 26.0$, $1.0 \pm 0.3/81.6 \pm 22.6$ and $0.9 \pm 0.3/82.7 \pm 23.1$ respectively ($p=0.3/0.9$).

Conclusion: It might be suggested: patients with normal eGFR undergoing non-emergent coronary angiography can safely utilize AngII lowering drugs.