CKD, BP control, and Proteinuria: Combination of ACEI and ARB: still Recommended

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The protective effect of renin-angiotensin-aldosterone system (RAAS) blockade on end-organ damage reflects the role of increased RAAS activity in chronic kidney disease (CKD) and cardiovascular disease (CVD). Blockade of the RAAS at any of the single level dose not provide completely blocked of the cascade due to compensatory responses at other level known as angiotensin (ANG)-I, ANG-II and aldosterone escape, which could be involved in suboptimal therapeutic efficacy. Until recently, there has been little or even conflicting evidence for the use of combination RAAS therapy in the prevention or management of nephropathy. The COOPERATE trial was the earlier landmark study that provide support for ANG-converting enzyme inhibitos (ACEI)/ANG receptor blockers (ARB) combination therapy in non-DM nephropathies but was retracted because of inconsistencies in the data. The VALINAT and ONTARGET studies showed the dual blockade was harmful in patients with low renal risk (without DM, HTN, and albuminuria), whereas a trend towards a better renal outcome was observed in patients with overt nephropathy. Other studies on ACEI/ARB combination therapy, such as LIRICO, VALID, and NEPHRON-D, on hard endpoints in patients with over protenuria are on going. In CKD, dual RAAS blockade should be restricted in patients with residual proteinuria despite maximal monotherapy RAAS blockade and adequate volume control by sodium restriction and/or diuretic therapy, although long-term benefit remains to be proven. The combination of aldosterone antagonist with ACEI or ARB may be used in selected patients with heart failure, whereas in CVD there is virtually no place for the ACEI/ARB combination according to the published literature. Results of ongoing studies evaluating the effects of dual blockade with renin inhibitor and ACEI or ARB on hard cardiovascular and renal endpoints (AVOID and ALTITIDE) are expected with great interest. Although, the combination of ACEI with ARB generally had a better antihypertensive and antiprotenuria effect than monotherapy, more adverse effects with more hypotension and hyperkalemia, and larger renal function decline should be taken into consideration.

References:

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