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Commentary

Drugs Usage in Chronic Kidney Disease and their Side Effects

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DESCRIPTION

There are an unimaginable number of pharmaceuticals on the market today, and their prescription is continually increasing, boosting the danger of serious side effects. The general public is currently exposed to a wide range of pharmacologic drugs, the bulk of which are harmful and utilized without scientific justification. Even more drugs are mistakenly eaten with food, natural remedies, and over-the-counter prescriptions without medical supervision or prescription. As a result, broad toxicity develops, which is difficult to detect, often goes unrecognized, and can be quite damaging. Because most drugs are excreted through the kidney, it's reasonable to assume that the kidney could be a particularly vulnerable target for their harmful effects.

You should take care to maintain your kidneys if you have Chronic Kidney Disease (CKD), diabetes, or high blood pressure, or if you take certain blood pressure drugs that affect your kidneys. Two types of blood pressure drugs, ACE inhibitors and ARBs, can help delay renal failure by reducing the loss of kidney function. You can tell if you're taking one of these medications by its generic name. ARBs have generic names that finish in sartan, such as losartan and lisinopril, while ACE inhibitors have generic names that end in pril. You could also take a diuretic, often known as a water pill, to help you reach your blood pressure goals.

Effect of antihypertensive drugs on chronic kidney disease

Chronic Kidney Disease (CKD) has become a global health crisis of pandemic proportions. CKD may go undetected for many years. Patients with CKD are more likely to develop cardiovascular disease. Microalbuminuria and a low GFR are well-known cardiovascular risk factors in both diabetic and nondiabetic hypertensive adults, and many older patients die of cardiovascular disease rather than ESRD. The Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT) found that chlorthalidone was superior to other drugs in preventing one or more major types of cardiovascular disease, but there was no discernible difference in all-cause mortality.

Proteinuria, which includes both microalbuminuria and clinical proteinuria, was found to be a strong predictor of kidney disease progression in the Prevention of Renal and Vascular End-stage Disease (PREVEND) experiment. Through pro-inflammatory and profibrogenetic damage in tubular cells, which can aid in the formation of interstitial fibrosis and tubular atrophy, and has a pathogenic influence on renal function loss.

When a doctor sees a change in a patient's renal function, he should do a complete drug history to discover if any of the medications being used could be the source of the renal impairment. The concentrations of PCr and electrolytes, as well as their variations over time, must be determined. Uranalysis should always be performed, as should other tests such as acid–base status, enzymuria, renal echography, urine cultures, eosinophiluria, and eosinophil blood count.

ACEIs and ARBs have arguably gotten the greatest attention in terms of research. Because of their ability to induce dilation of efferent arterioles in the renal glomerulus, resulting in lower intra-glomerular pressure, and to inhibit pro-inflammatory and proliferative actions of angiotensin II, they are the most commonly used drugs in CKD patients, particularly those with diabetes. They also have a neutral metabolic effect and have been demonstrated to diminish proteinuria considerably. Other medications' long-term effects on CKD are less well-studied. CCBs have been demonstrated to effectively manage blood pressure, blockers to regulate sympathetic nervous system over activity seen in chronic renal failure, and diuretics to reduce intravascular volume expansion caused by fluid retention.

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