

## PROTON PUMP INHIBITOR USE AND RISK OF PROGRESSION OF CHRONIC KIDNEY DISEASE IN OUR PRACTICE AND A SYSTEMATIC REVIEW

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**Background and aim:** Proton pump inhibitors (PPIs) are associated with increased risk for chronic kidney disease (CKD). The widely used drugs might be part of the reason CKD prevalence has risen faster than would be expected from the trends in known CKD risk factors, such as diabetes mellitus and hypertension. However, a spate of observational studies suggest an association between PPI use and adverse events, including infection, bone fracture, and dementia. This review details evidence linking the use of PPI therapy to the development of kidney disease, including early case reports of acute interstitial nephritis and subsequent large observational studies of acute kidney injury (AKI), chronic kidney disease (CKD), and end-stage renal disease (ESRD).

**Materials and methods:** We performed a systematic review of studies to assess the association between PPI use and the risk of adverse kidney outcomes. We searched MEDLINE, SCOPUS, Web of Science, CINAHL, Cochrane Library and grey literature with no language restrictions (through 30 September 2017). Adverse kidney outcomes were acute interstitial nephritis (AIN), acute kidney injury (AKI), chronic kidney disease (CKD) and end-stage renal disease (ESRD). In our practice 10 patients who had different kidney diseases. During the collection of the anamnesis, it was found out that these patients were taking proton pump inhibitors. After that, three developed acute renal failure, seven patients have chronic kidney disease. Patients with chronic kidney disease have many turned in time. Five have a 2-3 stage of chronic kidney disease. Two patients on programmed hemodialysis.

**Conclusion.** PPI usage was associated with adverse kidney outcomes; however, these findings were based on observational studies and low-quality evidence. Additional rigorous studies are needed for further clarification. Given the widespread use of PPIs, even a small effect on kidney outcomes could result in large public health burden. Timely cessation of PPI therapy when there is no clear indication for use might reduce the population burden of kidney disease.