Hepatitis C infection and chronic kidney disease are major health burden worldwide. Hepatitis C infection is associated with a wide range of extra-hepatic manifestations in various organs including the kidneys. A strong association between hepatitis C and chronic kidney disease has come to light. Hemodialysis in supporting the end stage renal disease patients unfortunately carries a risk for hepatitis C infection. Despite much improvement in the care of this group of patients, the prevalence of hepatitis C infection in hemodialysis patients is still higher than the general population. Hepatitis C infection has a negative effect on the survival of hemodialysis and renal transplant patients. Treatment of hepatitis C in end stage renal disease patients using conventional or pegylated interferon with or without ribavirin remains a clinical challenge with low response rate, high dropout rate due to poor tolerability and many unmet needs. The approval of new direct acting antiviral agents for hepatitis C may dramatically change the treatment approach in hepatitis C infected patients with mild to moderate renal impairment. However it remains to be confirmed if the newer Hepatitis C therapies are safe in individuals with severe renal impairment. This review article discusses the relationship between hepatitis C and chronic kidney disease, describe the various types of renal diseases associated with hepatitis C and the newer as well as the existing treatments for hepatitis C in the context of this subpopulation of hepatitis C patients.