

KDIGO Clinical Practice Guidelines on Hepatitis C in Chronic Kidney Disease acknowledged by ISN

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INTRODUCTION

Kidney Disease: Improving Global Outcomes (KDIGO) is a global nonprofit organization dedicated to improving the care of patients with kidney disease worldwide, by developing and encouraging the implementation of evidence-based clinical practice guidelines (CPGs). KDIGO CPGs are based primarily on scientific evidence, and issues such as cost do not weigh heavily on their construction. The KDIGO CPGs for the prevention, diagnosis, evaluation and treatment of hepatitis C in patients with chronic kidney disease (CKD)¹ are of particular relevance to global health, since hepatitis C is common in the developing world, and diagnosis and treatment of this disease is expensive by the standards of many economies.

The full English-language guidelines and summaries in other languages are accessible at www.kdigo.org. In the full 99-page document, KDIGO presents a detailed review of the available evidence and outlines recommendations for practice. The document has been examined by the CPG Committee of the International Society of Nephrology (ISN). The ISN acknowledges these guidelines and recommends them for implementation by its members. Here, we summarize the salient points of the guidelines and highlight their utility for clinical practice worldwide.

METHODOLOGY OF KDIGO GUIDELINES FOR HEPATITIS C

The guidelines were developed by a multinational and multidisciplinary working group and subjected to consultation and review by many bodies and individuals worldwide in order to incorporate global viewpoints and expertise. The methods of acquiring and assessing the published literature are fully documented, and these processes were aided by the Cochrane Renal Group. In addition, a group of experts in CPG methodology was commissioned to develop a “rigorous and consistent” approach.

The difficulty of making practice suggestions when the evidence base is poor was addressed by grading recommendations according to whether evidence is strong, moderate or weak. Controversy is inevitable where the evidence for a recommendation is moderate or weak; in this situation, the stated objective “to globalize and share the evidence, but localize the decision for their (the recommendations’) adoption and implementation” is particularly pertinent. We will concentrate mainly on the strong recommendations, with passing commentary on the suggestions based on moderate or weak evidence.

GUIDELINE 1: DETECTION AND EVALUATION OF HEPATITIS C VIRUS IN CKD

This guideline comprises the following three strong recommendations. First, testing for hepatitis C virus (HCV) should be performed in all patients on maintenance hemodialysis and in those who are scheduled for kidney transplantation; in the former group, testing should be performed upon initiation of hemodialysis or transfer to another hemodialysis facility. Second, nucleic acid testing (NAT) for HCV should be performed in patients on hemodialysis who have unexplained abnormal aminotransferase levels. Finally, if a new HCV infection in a hemodialysis unit is suspected to be nosocomial, NAT should be performed in all patients who could have been exposed to the virus.

These recommendations should be applicable worldwide, as it is rare that a country or individual can afford maintenance hemodialysis yet not afford occasional HCV testing—at least by means of HCV antibody measurement if not NAT. These two techniques provide similar epidemiological information, although HCV antibody measurement has lower accuracy than NAT and cannot detect very early infection.

The weaker recommendations regarding HCV detection are less applicable in many countries. The suggestion that all patients with CKD be

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tested for HCV is unlikely to be followed since the number of such patients is enormous. Other suggestions revolve around the frequency of testing and the use of NAT, both of which are subject to local factors.

GUIDELINE 2: TREATMENT OF HCV INFECTION IN PATIENTS WITH CKD

The strong recommendations in this guideline are: first, that all patients with HCV infection and CKD should be followed up for HCV-associated comorbidities, regardless of treatment; and second, that all patients with CKD who have clinical or histological evidence of infection should be followed up every 6 months.

The logic trail for these recommendations is clear. HCV infection—including HCV-associated liver disease—adversely affects the outcomes of patients with any stage of CKD. Although other comorbidities might take precedence in the later stages of CKD, there is no reason to monitor liver disease in patients with CKD less carefully than in the non-CKD population.

Despite being based on weak evidence, the guideline's advice on how and when to treat HCV infection at all stages of CKD is particularly valuable. Tables in the full document that detail the published data underpinning this advice can facilitate local interpretation and implementation.

GUIDELINE 3: PREVENTING HCV TRANSMISSION IN HEMODIALYSIS UNITS

This guideline strongly recommends the following two measures: first, hemodialysis units should ensure implementation of, and adherence to, strict infection-control procedures to prevent transmission of blood-borne pathogens including HCV; and second, infection-control procedures should prevent the transfer of blood or fluids contaminated with blood between patients, either directly or via contaminated equipment or surfaces.

Strict adherence to this guideline should have a great impact on the transmission of HCV infection in hemodialysis units worldwide. HCV infection rates in hemodialysis units are 5–10% in developed countries and reach 70% in some developing nations. These rates are far higher than in the general population, reflecting both a high risk of HCV infection in patients on hemodialysis and a high risk of CKD in HCV-infected individuals. The evidence that cross-infection can be reduced by strict infection-control measures in hemodialysis units is compelling.

The lack of strong or even moderate evidence for practices such as isolation of infected patients within hemodialysis units, dedication of dialysis machines for these individuals and avoiding reuse of dialyzers will reassure health-care providers who make such decisions based on local factors including HCV prevalence, machine availability, patient overcrowding and experience with reuse.

GUIDELINE 4: MANAGEMENT OF HCV-INFECTED PATIENTS BEFORE AND AFTER KIDNEY TRANSPLANTATION

This guideline strongly recommends that all kidney transplant candidates, recipients and donors be tested for HCV infection.

Again, the emphasis is on determining the prevalence and preventing the spread of HCV. The adverse effects of HCV infection in renal transplant recipients are well documented. Advice is given (admittedly with a weak evidence base) on the management of an HCV-infected prospective transplant recipient or donor, recognizing that post-transplantation treatment of HCV infection is difficult. Particularly important for developing countries and for patients in whom HCV treatment has failed or is inappropriate, the statement “HCV infection should not be considered a contraindication for transplantation” is supported by moderate evidence. In situations where resource deficiency means a patient could have either immediate transplantation or treatment for HCV, but not both, the choice will often be immediate transplantation, avoiding the cost of both dialysis and HCV treatment.

CONCLUSIONS

As with all CPGs, the KDIGO guidelines need to be considered in the context of the specific patient and environment in question. The clear separation of strongly evidence-based recommendations from more weakly supported advice, should, if evaluated carefully, greatly aid local decision making. The guidelines provide the best current analysis of the evidence available to inform such judgments and should make a substantial contribution to the care of patients with CKD worldwide.

Reference

- 1 Kidney Disease: Improving Global Outcomes (2008) KDIGO clinical practice guidelines for the prevention, diagnosis, evaluation and treatment of hepatitis C in chronic kidney disease. *Kidney Int* **73** (Suppl 109): S1–S99

Acknowledgments

This ISN Commentary on the KDIGO Clinical Practice Guidelines on Hepatitis C in Chronic Kidney Disease is also published on the ISN Nephrology Gateway (www.isn-online.org; select 'Education & Resources', then 'Guidelines').

Competing interests

G Becker, E Bellorin-Font, PKT Li and C Wanner have declared an association with the following organization: KDIGO. See the article online for full details of the relationships. The other authors declared no competing interests.