Editorial

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Italian AKI Guidelines: The Best of the KDIGO and ADQI Results

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Continuous search for strong evidence supporting the many procedures and interventions in critical care nephrology has led to development of guidelines and recommendations [1]. These documents are intended to support the clinicians in their practice improving outcomes and reducing medical errors and complications. Clinical practice guidelines sometimes are difficult to prepare or to implement due to the scanty evidence in specific areas. There are high costs involved in preparing accurate and solid guidelines, while, on the other side, the full application of guidelines is sometimes difficult if not impossible in the real clinical arena.

Acute kidney injury (AKI) makes no exception to these concerns. The evidence supporting diagnostic and therapeutic measures applied in daily practice is in most cases insufficient to clearly establish what is beneficial for the patient and what is futile. Thus, the lack of solid evidence and the limitation of the available resources lead to the sort of clinical practice that is a mixture of anecdotes, expert opinions and sometimes biased visions. In this setting, a person could become skeptic and paralyzed, or he may be pushed to go for the best possible approach. The KDIGO guidelines for AKI have represented a step forward, but they have been continuously challenged by new studies and new publications making it necessary to consider not only the guidelines but also all the related commentaries [1]. In this view, The Italian Society of Nephrology, the Italian Society of Anesthesiology and Intensive Care and the Italian Society of Intensive Care have initiated an effort to translate and update the KDIGO guidelines for regional use in Italy [2], applying the following criteria:

(1) The main body of guidelines has been taken from the KDIGO, thus making an accurate translation and keeping the level of evidence and recommendation for every point as it originally was.

(2) A thorough search of the literature has been made adding the references and the results of all papers published in each field of AKI since the KDIGO publication until December 2014.

(3) The comments to the KDIGO guidelines made by different organizations including the ERA-EDTA, the ASN, Canadian Society of Nephrology, the NHS and others have been included for the benefit of the reader to make him/her aware of the different scientific points of view.

(4) A specific effort has been made to comment on the real applicability of the guidelines to the Italian practice, given the availability of medications, devices etc., in that region.

(5) A special chapter has been dedicated to nomenclature and terminology in the attempt to unify and harmonize all definitions and abbreviations.

(6) Last but not least, a special commentary has been dedicated to the guidelines to guidelines, which is a series

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Table 1. The clinician should consider the following principles when using the AKI guidelines

The principle of dynamic evaluation	Guidelines represent a dynamic process that is continuously updating and upgrading in light of new evidence and new research. The clinician should be aware of new studies and integrate them into the existing evidence and recommendations.
Principle of pertinence	Guidelines cannot be used to measure the performance of a center/team, nor can they be utilized for legal/administrative purposes. They pertain to the clinical operations.
Principle of clinical support	Guidelines represent an aid for clinicians but they have not an absolute value.
Principle of relativity	International guidelines are not directly or completely transferable and applicable to national or local environments.
Principle of subsidiarity	Guidelines are not a substitute for medical decision.
Principle of appropriateness	Guidelines can only be utilized for those scopes they have been conceived for. Any other use has to be considered inappropriate.

of suggestions on how to use the given guidelines, and these are reported in table 1.

Furthermore, in addition to the KDIGO guidelines, Italian AKI guidelines have heavily referred to the activity of the Acute Dialysis Quality Initiative (ADQI) conferences and relevant results [3–8]. The ADQI was created in the years 2000 by a group of friends in Pittsburgh, San Diego, Melbourne and Vicenza. The approach was extremely modest and minimalist with limited scope to try to achieve some consensus on the areas that require investigation, on the main unanswered questions in the field of AKI and on the possible studies to be performed to answer those questions. Basically, the following considerations were made: AKI is a major clinical problem; it is an even greater clinical problem in ICU and more common than ARDS but nevertheless it is characterized by fewer publications, less funding, no large trials and no accepted definitions. So the most urgent agenda were the following: gather experts, define current knowledge, define gaps in knowledge, define important issues and define focus of future research.

Since then, we have come a long way. Some interesting products have been delivered by the ADQI. Among them, we may recall the BEST kidney study, at least 2 dose vs. outcome studies, the definition of criteria to begin renal replacement in the ICU and, last but not the least, the RIFLE classification of AKI. In particular, the paper reporting the original RIFLE description is among the top quoted papers in critical care. At the end of 2005, the P.A.S.S.P.O.R.T. project (prevention, assessment of severity, protection, outcome measures and replacement therapy) had been accomplished with success thus taking a further step toward nature and logic. At a certain point, in fact, although the ADQI had achieved some results and it continued to increase its popularity, a specific need emerged to expand the horizons of the original group and to achieve a broader view of the problem.

Based on this aspiration, we organized a retreat in Vicenza where a number of representatives from core societies and existing organizations (ASN, ACCP, ESICM, NKF, ISN and ADQI) met to discuss the possibility of developing a network of people interested in AKI representing societies. A decision was made to hold a conference under the banner of Acute Kidney Injury Network (AKIN) in Amsterdam, in order to engage a wider number of societies/groups and countries in this initiative. The objectives of the summit were the following: clarify the current state of knowledge regarding the epidemiology of AKI (previously known as 'acute renal failure') around the world, in the context of health care resources and population specifics; describe current clinical and basic research, which would serve to inform both clinical practice and future studies; define a terminology and framework for AKI such that future research in all areas would be enhanced; establish a collaborative network of international groups for further research and clinical care in the area of AKI and, finally, describe key questions to be answered using a combination of consensus conference and research methodology. In this way, AKIN represents the natural counterpart of the ADQI, where the ADQI is mostly designed to define the research

agenda and the AKIN represents the collaborative effort to generate a network that makes this research happen.

The mission of the AKIN is to provide a mechanism for international, interdisciplinary and intersociety collaboration, to develop and facilitate research initiatives and to inform and standardize clinical practice in the prevention and treatment of AKI. As an immediate consequence of the Amsterdam conference, a consensus conference was held in Vancouver where the first product of the AKIN group was developed.

The content of ADQI meetings, including cardiorenal interactions, fluid management, AKI biomarkers and many others, has been published and has originated new evidence in the field of critical care nephrology.

The Italian AKI guidelines heavily refer to these important achievements and further enrich the scientific value of the statements, the evidence and the strength of recommendation. We must acknowledge that the KDIGO strongly supported our idea to translate and integrate the KDIGO AKI guidelines, and we are grateful for the stimulating comments and the kind support.

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