



ISSN: 1697-
090X

Inicio
Home

Indice del
volumen
Volume index

Comité Editorial
Editorial Board

Comité Científico
Scientific
Committee

Normas para los
autores
Instruction to
Authors

Derechos de autor
Copyright

Contacto/Contact:



Rev Electron Biomed / Electron J Biomed 2020;1:2-6.

Editorial:

SHOULD WE REDEFINE ACUTE KIDNEY INJURY CONCEPT?

¹Victoria P. Musso-Enz, ²Guido M. Musso-Enz, ¹Carlos G. Musso, MD. PhD.

**¹Instituto Universitario. Hospital Italiano
de Buenos Aires,
²Facultad de Medicina,
Pontificia Universidad Católica Argentina
Santa María de los Buenos Aires.
Argentina**

[carlos.musso @ hospitalitaliano.org.ar](mailto:carlos.musso@hospitalitaliano.org.ar)

[Version en español](#)

It is known that renal physiology is classically constituted by five main functions; glomerular filtration, tubular reabsorption, tubular secretion, as well as

renal endocrine and exocrine activities¹.

Acute renal injury (AKI) is one of the main renal alterations, as well as one of the most frequent complications associated with non-renal medical problems that require hospitalization²⁻³.

AKI is defined, according to the KDIGO guidelines, by the following criteria⁴:

- increase in serum creatinine ≥ 0.3 mg/dl within 48 hours, or
- increase \geq of 1.5 times of baseline serum creatinine presumed to occur within 7 previous days, or
- urine volume reduction <0.5 ml/kg/hour for 6 hours.

Therefore, since the current AKI definition is only based on renal filtering or urine excretory reduction, it cannot allow physicians to detect renal damages expressed by tubular dysfunction.

AKI affects about 20% of hospitalized patients, regardless of the hospitalization cause, and is associated with high rates of in-hospital morbidity, mortality and costs⁵⁻⁶. Thus, it would be crucial to better recognize this entity to install an early treatment and consequently reduce its associated mortality, morbidity and hospitalization costs.

For this purpose, it would be very useful to newly conceptualize AKI to include renal tubule dysfunction criteria in its definition. In this sense, simple tubular dysfunction markers should be investigated with the objective of applying this new concept to clinical setting⁷.

In conclusion, the current AKI definition seems to be incomplete, and would be very important to incorporate tubular dysfunction criteria to its clinical screening.

REFERENCES

- 1.- Beker BM, Corleto MG, Fieiras C, Musso CG. Novel acute kidney injury biomarkers: Their characteristics, utility and concerns. *Int Urol Nephrol* 2018;50:705-713
- 2.- Shlipak M, Stehman-Breen C. Observational research databases in renal disease. *J Am Soc Nephrol.* 2005;16:3477-3484.
- 3.- Musso CG, Rosell C, Gonzalez-Torres H, Ordonez J, Aroca-Martinez G. Primary prevention for acute kidney injury in ambulatory patients. *Postgraduate Medicine.*2020; 132: 746-748

4.- KDIGO Clinical practice guideline for acute kidney injury *Kidney Int Suppl* 2012;2:1-38.

5.- Córdova-Villalobos JA, Barriguete-Meléndez JA, Lara-Esqueda A, Barquera S, Rosas-Peralta M, Hernández-Avila M, de León-May ME, Aguilar-Salinas CA. Las enfermedades crónicas no transmisibles en México: sinopsis epidemiológica y prevención integral. *Salud Publica Mex.* 2008;50:419-427.

6.- Musso CG, Terrasa S, Ciocchini M, González-Torres H, Aroca-Martínez G. Looking for a better definition and diagnostic strategy for acute kidney injury: A new proposal. *Arch Argent Pediatr* 2019;117:4-5.

7.- Risso MA, Sallustio S, Sueiro V, Bertoni V, Gonzalez-Torres H, Musso CG. The Importance of Tubular Function in Chronic Kidney Disease. *International Journal of Nephrology and Renovascular Disease.* 2019;12 257-262.

CORRESPONDENCE

Carlos G. Musso, MD. PhD.
Instituto Universitario.



Hospital Italiano de Buenos Aires,
Buenos Aires. Argentina

Email: [carlos.musso @ hospitalitaliano.org.ar](mailto:carlos.musso@hospitalitaliano.org.ar)

