MINOR ESSENTIAL REVISIONS

This is a retrospective study that analyzes the results of kidney ultrasound of all inpatients that have shown an AKI. The aim of this study was to determine whether ultrasound is helpful in determining the cause of the acute kidney injury and so if the costs of the examination are justified. Since kidney morphological data during AKI are nonspecific and useless in characterizing the renal damage, authors have focused only on the data analysis of clinical conditions that may predict an obstructive acute injury. Since the number of clinical cases of obstructive AKI is very low, authors’ conclusions are obvious: ultrasound is useless and should be performed only in those clinical cases in which an obstruction is suspected.

The main criticism is that authors do not consider that ultrasonography in patients with AKI must include a color Doppler evaluation in order to analyze the qualitative features of renal flow and to determine the Resistive Index (RI). In fact, prerenal acute renal injury is characterized by a vasodilation of preglomerular vessels, and in parenchymal damage there is a renal vasoconstriction with tubular ischemia.

This way of considering the utility of ultrasound should not belong to nephrologists that should request an ultrasound examination with color Doppler in order to analyze not only the kidney morphology, but also the renal perfusion, even with the use of contrast medium.

Nevertheless the study, even if retrospective, is well written and organized. The discussion section explains the results although the statements are not completely acceptable. For this reason, I would suggest not to give to the reader an incorrect message about the uselessness of ultrasonography in patients with AKI, so I’d change the title of the paper in "Clinical utility of gray-scale ultrasound in acute kidney injury." Data reported are well known in literature and are not original, but the study deserves to be published for the power of the sample.

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a
statistician.

**Declaration of competing interests:**

NO CONFLICT OF INTEREST