Oral Hydration May Be an Option to Prevent Contrast-Induced Nephropathy in Elective Coronary Interventions

Paulo Roberto Barbosa Evora[1]

Universidade de São Paulo – Faculdade de Medicina de Ribeirão Preto – Cirurgia e Anatomia,[1] *Ribeirão Preto, SP – Brazil*

Short Editorial related to the article: Effectiveness of Oral Hydration in Preventing Contrast-Induced Nephropathy in Individuals Undergoing Elective Coronary Interventions

The study[1] has a questionable ABC Cardio editorial profile and does not present any novelty. However, its publication decision would be useful for cardiologists in their preoperative control activity. Acute renal insufficiency is always discussed, and sometimes people say it is underestimated or overestimated.

Many studies support alternative protocols to prevent contrast-induced nephropathy (CIN) caused by iodine contrasts. It is opportune mentioning the safety of ambulatory protocols for vessels and heart exams carried out on the ambulatory "cath-lab."

These protocols include 1) Drugs, 2) alkalinization with sodium bicarbonate, and; 3) hydration. Among different drugs, nicorandil has been used in patients with chronic renal dysfunction. A trial to assess its preventive effect on high-risk patients revealed substantial efficacy over hydration protocol for cardiac catheterization.[2,3] Among different drugs, nicorandil has been used in patients with chronic renal dysfunction.[4,5]

We agree with the authors[1] that the most effective preventive measure to date is intravenous hydration (IVH). However, current evidence shows that oral hydration (OH) is comparable to intravenous infusion. Nevertheless, the effectiveness of ambulatory OH still needs more investigations in elective coronary procedures.

The OH protocol performed by the patient appears to be like the hospital IVH protocol in renal protection. The authors suggest testing it in large trials in an attempt to prove that OH is effective and would be useful in medical practice.

References

1. Pioli MR, Couto RM, Francisco JA, Antoniassi DQ, Souza CR, Olivio MY, et al. Effectiveness of Oral Hydration in Preventing Contrast-Induced Nephropathy in Individuals Undergoing Elective Coronary Interventions. Arq Bras Cardiol. 2023; 120(2):e20220529.
2. Rudnick MR, Fay K, Wahba IM. Fluid administration strategies for the prevention of contrast-associated acute kidney injury. Curr Opin Nephrol Hypertens. 2022 Sep 1;31(5):414-24. doi: 10.1097/MNH.0000000000000815.
3. Zaki HA, Bashir K, Iftikhar H, Alhatemi M, Elmoheen A. Evaluating the Effectiveness of Pretreatment With Intravenous Fluid in Reducing the Risk of Developing Contrast-Induced Nephropathy: A Systematic Review and Meta-Analysis. Cureus. 2022 May 8;14(5):e24825. doi: 10.7759/cureus.24825.
4. Iranirad L, Hejazi SF, Sadeghi MS, Jang SA. Efficacy of nicorandil treatment for prevention of contrast-induced nephropathy in high-risk patients undergoing cardiac catheterization: A prospective randomized controlled trial. Cardiol J. 2017;24(5):502-7. doi: 10.5603/CJ.a2017.0028.
5 Sebastià C, Páez-Carpio A, Guillen E, Paño B, Arnaiz JA, De Francisco AL, et al. Oral hydration as a safe prophylactic measure to prevent post-contrast acute kidney injury in oncologic patients with chronic kidney disease (IIIb) referred for contrast-enhanced computed tomography: subanalysis of the oncological group of the NICIR study. Support Care Cancer. 2022 Feb;30(2):1879-87. doi: 10.1007/s00520-021-06561-7.

Keywords

Fluid Therapy/methods; Nephropathies/prevention and control; Oral Hidratation; Intravenous Hidratation; Nicorandil/therapeutic use; Cardiac Catheterization/methods

Mailng Address: Paulo Roberto Barbosa Evora •
Avenida Bandeirantes, 3900, Postal Code 14049-900, Ribeirão Preto, SP – Brazil
E-mail: prbevora@gmail.com

DOI: https://doi.org/10.36660/abc.20220868