

Early discharge strategies after endovascular abdominal aortic repair



We read with great interest the article by Montross et al¹ entitled "The selection of patients for ambulatory endovascular aneurysm repair of elective asymptomatic abdominal aortic aneurysm."

Percutaneous endovascular strategy is the preferred treatment modality in the current practice for abdominal aortic aneurysms with low mortality and morbidity.² In the current literature, there are some studies regarding the same day discharge of endovascular abdominal aortic repair (EVAR) patients.³ However, we would like to mention some concerns regarding this study. Patients exposed to the use of iodinated contrast have a higher risk of developing acute kidney injury, particularly at 48 and 72 hours.⁴ In this study, serum creatinine values of the patients at 48 and 72 hours were not presented, precluding the detection of any postprocedural contrast-associated acute kidney injury.

In addition, pre-interventional volume replacement therapy is recommended during EVAR to minimize the risk of postprocedural contrast-associated acute kidney injury.⁵ In this article, it is unclear that any volume-enhanced therapy was given before or after the intervention and whether the authors considered this issue, while recommending early discharge. Finally, in the current guidelines, the use of antiaggregant and preoperative prophylactic antibiotic drugs is recommended for EVAR patients.⁶ However, there are no clear data available regarding the use of these medications in this study.

In conclusion, we congratulate Montross et al for their real-setting and valuable study. We would like to hear the opinions of the authors on these issues.

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Reply



We thank Avni Bayraktar et al¹ for their interest in our report and the questions they raised in their letter to the editor titled "Early Discharge Strategies After Endovascular Abdominal Aortic Repair," in which they brought up some valid concerns. Regarding the occurrence of contrast-induced nephropathy in patients undergoing endovascular abdominal aortic aneurysm repair (EVAR), we are very cognizant of these concerns throughout the perioperative process, especially owing to the increase in morbidity associated with acute kidney injury (AKI) after EVAR.² To abate this, we follow the Society for Vascular Surgery guidelines,³ administering perioperative hydration with crystalloids to all patients, started by the anesthesia staff on the morning of surgery. Hydration is continued postoperatively, varying from <1 to >20 hours. This protocol is also in agreement with the KDIGO (Kidney Disease Improving Global Outcomes) and KDOQI (National Kidney Foundation's Kidney Disease Outcomes Quality Initiative) guidelines.^{4,5} However, no guidelines have recommended a specific duration or volume of hydration. At present, in the United States, no insurance authorization will be given for preadmission to increase the length of preoperative hydration. Postoperatively, as we hypothesized in our report,⁶ hydration was often continued using old protocols until someone thought to stop it, as noted by the wide range we identified. Overall, we believe that 6 hours of hydration postoperatively without pre-existing disease or complications should be sufficient, although this is practice and not evidence based.

Regarding the laboratory assessments, all the patients had undergone an outpatient basic metabolic profile to assess for any baseline renal impairment before EVAR. Most patients will also undergo a basic metabolic profile on postoperative day 1 before discharge; however, the findings only rarely will change our discharge plan. In our study, 8% of the patients had had a history of renal insufficiency, resulting in a greater higher risk of contrast-induced nephropathy and AKI. However, we found no difference in the eligibility of this subgroup for same day discharge.⁶ Our current quality standards recommend discharge on postoperative day 1 after