

Editorial

# Management of Endoscopy Patients' Hydration Status during National Shortage of Intravenous Fluids

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## Editorial

Traditionally Patients are started on Intravenous (IV) fluids prior to the colonoscopy & Endoscopy at the Ambulatory Surgical Centres (ASC) [1]. However, with a recent dire national shortage of IV fluids, this routine practice was changed at many ASCs and patients received Keep Vein Open (KVO) IV cannula without IV fluids.

With this change of the practice, it was observed that our patients had frequent episodes of temporary/transient hypotension during the peri-procedure period at the endoscopy centre. IV bolus fluids had to be given to the patients and occasionally IV ephedrine as well to restore the blood pressure. No adverse sequences were noted. These patients recovered without any adverse consequences and were discharged home in good condition [2]. However, this observation of frequent hypotension episodes became a concern to our quality control committee as to the patient's optimal care during the peri-operative period. This was investigated further to estimate the incidence and identifies the high risk patients for hypotension [3]. At our ASC, the Endoscopy nursing staff reviewed charts for three months (09/01/14 – 11/30/14). A total of 514 charts were analyzed. 27 patients had relatively persistent low blood pressure peri-operatively and received IV fluids with or without ephedrine to restore the IV fluids. The incidence was 5.2%.

To identify the incidence of hypotension before the practice of KVO IV, a total of 478 Charts were reviewed from 1/1/13- 3/30/13 (when all the patients routinely received IV fluids) and four patients were found to have to receive ephedrine for episodes of hypotension. This incidence rate is 0.89%. Thus a six fold increase in the incidence of hypotension was noted when IV fluids are not routinely given.

## Analysis of at Risk Patients

The individual charts of patients who had hypotension requiring

IV fluids  $\pm$  Ephedrine were analyzed. We identified the following characteristics as risk factors for peri-operative hypotension. 1. Elderly patients (>70 years). 2. Base line systolic blood pressure < 100mm H. 3. Procedures began after 11.00AM (i.e. longer duration of NPO). 4. BMI of less than 20. These patients were at a higher risk of hypotension when routine IV fluids were not given. With the ongoing national shortage of IV fluids it was decided to start IV fluids prior to the procedures on the high risk patients we identified as above. We restudied the episodes of hypotension for three months, 1/1/15- 3/31/15. 537 patient's records were reviewed. Five patients had low blood pressure requiring IV fluids  $\pm$  ephedrine. The rate was 0.93% and this is in consistent with the normal range for our centre when all patients received IV fluids.

We probably over board the IV fluids on all comers, but there are certain high risk patients who deserve IV fluids during the peri-procedure time. It may not be essential that each & every endoscopy patient receives IV fluids particularly in the midst of crisis of the national shortage of IV fluids. However, we recommend that patients with high risk characteristics for hypotension identified in the above study receive IV fluids for their optimal care and to avoid potential negative consequences [4,5].

## References

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