Regularly Scheduled Artificial (IV) Hydration among Head and Neck Cancer Patients Undergoing Radiotherapy-based Treatment

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Introduction

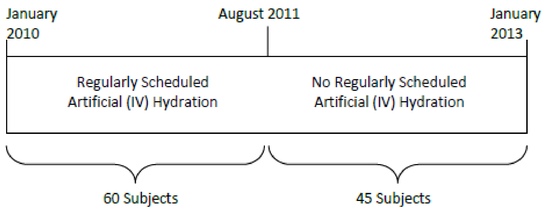
- Head and neck cancer is one of the top ten cancers diagnosed in the US.
- Patients with head and neck cancer are at higher risk for dehydration.
- Clinical dehydration is believed to negatively impact the efficacy of cancer treatment, and increase the number of treatment breaks.

Objectives

To compare treatment outcomes between head and neck cancer patients receiving regularly scheduled artificial hydration and those not receiving regularly scheduled artificial hydration.

Methods

- Retrospective chart review that queried electronic medical records (EPIC).

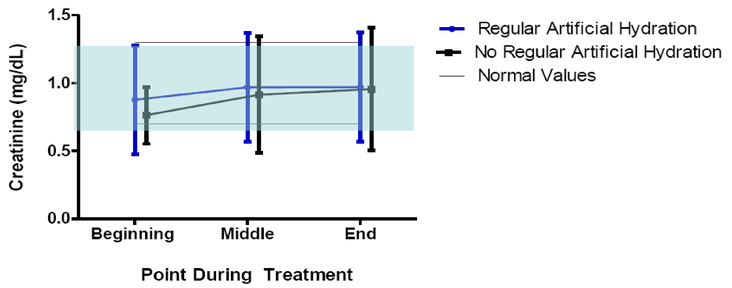


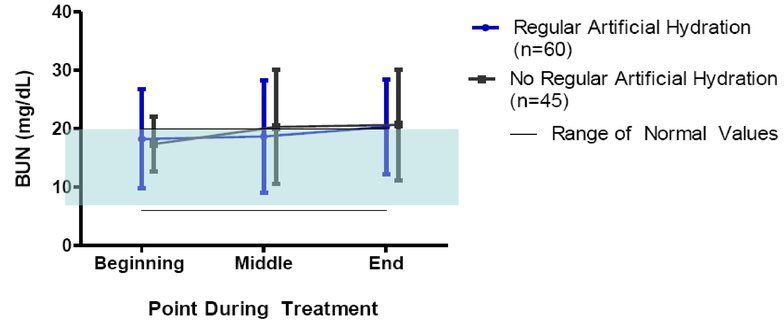
Primary Outcomes	
Number of Hospital Admissions	Renal Function
Secondary Outcomes	
Number of Breaks in Treatment	Weight Loss throughout Treatment
Hydration Status	

Results

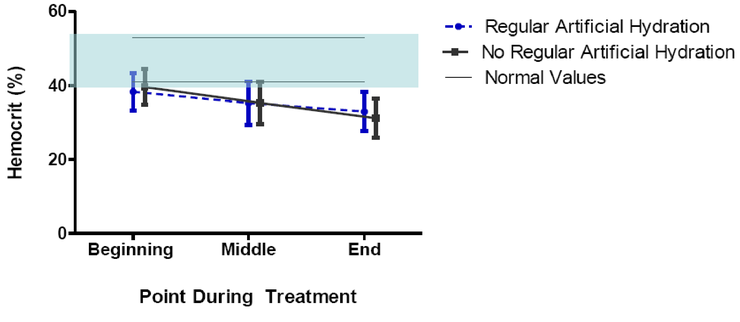
Participant Characteristics	Regularly Scheduled Artificial Hydration	No Regularly Scheduled Artificial Hydration
Number of Participants	60	45
Male Female	50 (83%) 10 (17%)	33 (73%) 12 (27%)
Age, years	61 ± 12	60 ± 10

- No difference in mean number of hospitalizations or number of treatment breaks between the groups.
- Change in renal function values and hydration status values were not significantly different between groups.
- Blood urea nitrogen and creatinine concentrations increased and hemoglobin and hematocrit decreased similarly throughout treatment in both groups.

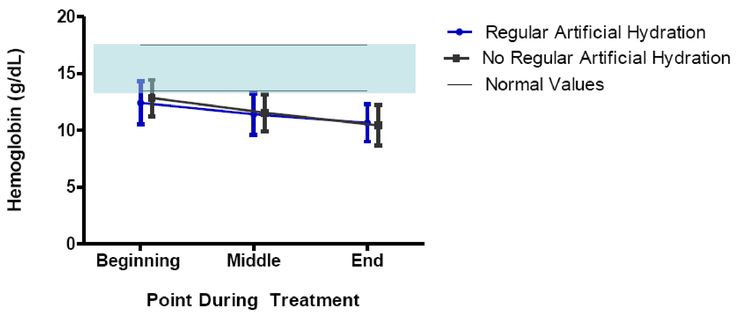




Renal function lab values showing comparisons between beginning of treatment to middle of treatment, middle of treatment to end of treatment, and beginning of treatment to end of treatment. Comparisons between different points in treatment showed no significant changes. With the exception of those not receiving regularly scheduled artificial hydration groups whose creatinine values were statistically significant throughout treatment ($p<0.01$). There were no significant differences between groups.



Hematocrit values showing comparisons between beginning of treatment to middle of treatment, middle of treatment to end of treatment, and beginning of treatment to end of treatment. Comparisons between different points in treatment significant changes between all points in treatment for both groups ($p<0.05$). No difference between groups.



Hydration status lab values showing comparisons between beginning of treatment, middle of treatment, and end of treatment. Comparisons between different points in treatment showed significant changes throughout treatment for both groups ($p<0.05$). There were no significant differences between groups.

- Both groups had mean weight loss greater than 1.5% of pre-treatment weight a month. This rate of weight loss is considered excessive by OHSU nutritional care standards.

Weight Change	Regularly Scheduled Artificial Hydration (n= 53)	No Regularly Scheduled Artificial Hydration (n=42)	Total (n=95)
Weight Loss Throughout Treatment (kg)	-4.63 ± 5.11	-4.98 ± 4.75	-4.83 ± 4.89
% Pre-Treatment Body Weight	-5.31 ± 5.43	-5.82 ± 5.57	-5.60 ± 5.49

*Change in weight during head and neck cancer treatment showed in means ± standard deviations

Conclusion

- The use of regularly scheduled artificial hydration did not result in fewer hospitalizations or treatment breaks compared to those who did not receive regularly scheduled artificial hydration.
- Subjects who received chemoradiation had the highest rates of hospitalizations and treatment breaks.
- The amount of weight loss observed in our sample was greater than our clinical nutrition standards but did not negatively impact the number of treatment breaks, and hospitalizations.

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