

Argon Plasma Coagulation with 1% Alum Irrigation Reduces Re-bleeding Associated with Radiation Proctitis

Kaumudi Somnay MD, Ellen Gutkin DO, Ratesh Khillan MD, P. Patrick Basu MD, Natalya Belova MD, Raj Wadgaonkar Ph.D, Dattatreyyudu Nori MD



INTRODUCTION

Radiation proctitis is a known complication that occurs in about 20% of patients treated with radiation therapy for pelvic malignancies. Pharmacotherapy is often ineffective, and surgical treatment carries a high morbidity and mortality risk because of poor post operative healing in previously irradiated tissue. Treatments with Laser coagulation and formalin can be unpredictable and both carry the risk of long-term complications such as strictures. Argon plasma coagulation (APC), has been shown to be effective in radiation-induced proctitis, however, recurrence rates of bleeding are high necessitating repeat procedures. This is probably because all angioectatic areas cannot be treated in one session.

Theoretical basis for use of Alum:

Alum (aluminum ammonium sulfate or aluminum potassium sulfate) has been safely used in the urological practice for treatment of bleeding from the bladder in radiation induced hemorrhagic cystitis.

We studied alum irrigation of the rectum following APC treatment of radiation proctitis in a randomized controlled double blinded trial in order to compare the rate of re-bleeding in alum treated versus saline treated (placebo) patients.

METHODS

We evaluated 60 radiation proctitis patients that presented with rectal bleeding between July 2006 to October 2007. They were randomized to treatment with APC together with either 1% Alum solution or saline.

Both groups were followed for re-bleeding every months for the first three months, then every three months for up to 12 months. Patient's symptoms were evaluated and degree of bleeding was assessed according to the following criteria: 0-no blood, 1-blood on toilet paper or stool, 2-blood in the toilet bowl, 3-heavy bleeding with clots, and 4-bleeding necessitating transfusion.

RESULTS

	No Rebleeding	Rebleeding	Total
Alum	21	9	30
Saline	3	27	30
Total	24	36	

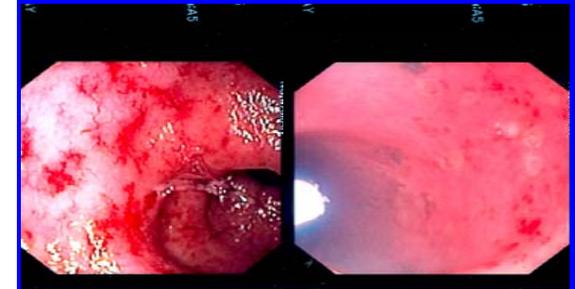
Alum therapy treatment was associated with significantly ($p < 0.0001$) fewer episodes of re-bleeding compared to saline. (RR 0.33 [CI .247-.524], Chi sq)

Bleeding Score	Alum	Saline
0	21	3
1	6	18
2	3	4
3	0	3
4	0	2

Out of 27 patients that had re-bleeding, 5 patients in the saline treatment group required intervention. Re-bleeding in the alum group was minimal and of no clinical significance.

Alum was well tolerated and adverse effects were similar in both groups.

PRE AND POST TREATMENT



CONCLUSIONS

Radiotherapy for pelvic malignancies can lead to radiation proctitis, often associated with significant bleeding, anemia, and transfusion dependency. We show that the simple combination treatment of radiation proctitis with APC and Alum is associated with significant reduction in re-bleeding compared to APC with saline, thereby decreasing the cost of treatment and risk of side effects.

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