

The effect of Ankaferd Blood Stopper on severe Radiation Colitis

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Abstract:	Ankaferd Blood Stopper (ABS) is a Turkish folkloric herbal extract which induces a very rapid formation of a specific hemostatic protein network on the bleeding or injured areas. A 71-year-old woman suffered from severe radiation rectosigmoiditis was treated successfully with the endoscopic topical application of ABS. Its advantages among various known measures are ease of use, no side effect and low cost. Further studies are needed to determine the full scope of ABS in the therapy of radiation colitis for not only bleeding but also for complete healing.

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ABSTRACT

Ankaferd Blood Stopper (ABS) is a Turkish folkloric herbal extract which induces a very rapid formation of a specific hemostatic protein network on the bleeding or injured areas. A 71-year-old woman suffered from severe radiation rectosigmoiditis was treated successfully with the endoscopic topical application of ABS. Its advantages among various known measures are ease of use, no side effect and low cost. Further studies are needed to determine the full scope of ABS in the therapy of radiation colitis for not only bleeding but also for complete healing.

INTRODUCTION

Ankaferd Blood Stopper (ABS) is a standardised herbal extract obtained from five different plants *Thymus vulgaris*, *Glycyrrhiza glabra*, *Vitis vinifera*, *Alpinia officinarum* and *Urtica dioica*. The use of topical ABS has been approved by the Turkish Ministry of Health for the management of dermal, external post-surgical and post-dental surgery bleedings (1). ABS induces a very rapid formation (<1 second) of a specific hemostatic protein network which acts as an anchor for vital physiological erythrocyte aggregation, covering the classical cascade model of the clotting system without independently acting on coagulation factors and platelets (1). Data on the efficacy of ABS in various causes of GI system bleeding have been reported recently (2-5). Here, we present the first case of successful ABS usage in the therapy of radiation colitis.

CASE REPORT

A 71-year-old woman was admitted to our hospital with the complaints of fatigue, nausea, rectal bleeding, tenesmus and constipation in June 2009. She had undergone chemotherapy and pelvic irradiation therapy during November 2008 and repeated intravaginal radiotherapy on February 2009, upon the diagnosis of cervix cancer grade IIB. Her symptoms had been begun three months after the last radiotherapy session. On physical examination, she seemed

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3 tired and moderately ill. Her vital signs were stable and there was mild tenderness at the left
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5 lower abdominal quadrant.
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8 The laboratory results were as follows: leukocyte count $5100/\text{mm}^3$, hemoglobin 10.5 g/dl,
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10 MCV 76 fl, platelets $345\ 000/\text{mm}^3$, sedimentation rate 45 mm/h (N: 0–10), C-reactive protein
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12 14 mg/l (N: 0–5), ALT 16 U/L (N: 0-54), AST 18 U/L (N: 0-34). ALP 150 (N: 40-150 U/L),
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14 GGT 14 (N: 5-64 U/L), total bilirubin 0.7 (N: 0.6-1.2 mg/dl), total protein 80 (N:64-83 g/dl)
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16 and albumin 33 (N: 35-45 g/dl). Stool investigations including microscopy, cultures and
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18 clostridial toxin were all negative. Colonoscopic examination revealed findings of severe
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20 radiation rectosigmoiditis involving the area between 13-20 cm from anal verge (Figure 1).
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22 The lesion was labeled as severe according to Wachter et al. (6) classification (*telangiectasia*:
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24 grade 0, none; *congested mucosa*: grade 2, diffuse not confluent reddening of the mucosa
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26 combined with an edematous mucosa; *ulceration*: grade 3, deep ulceration; *necrosis*: grade 1,
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28 necrosis). The biopsies obtained from the edges of the lesion were reported as focal active
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30 colitis and regenerative changes.
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36 After obtaining informed consent regarding the experimental nature of ABS, a total of 20 mL
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38 ABS solution was sprayed with a sclerotherapy needle onto the lesion. This produced greyish-
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40 yellow discolouration of the sprayed areas and bleeding stopped within seconds (Figure 2, 3).
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42 No sign of bleeding was observed in the following days and further three sessions were
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44 applied in a weekly manner, aiming the complete healing. At the follow-up, the giant
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46 ulcerated lesion was largely disappeared, except mild residual erosions and friability (Figure
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48 4-6). She had only mild pelvic pain at the 5th week, despite ongoing friability of lesion area.
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52 **DISCUSSION**

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55 Chronic radiation proctitis is a relatively common late complication of pelvic irradiation. The
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57 main symptoms are diarrhea, urgency, tenesmus, and rectal bleeding. While mild cases may
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59 settle spontaneously over some months, severe hemorrhagic radiation proctitis may require
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3 repeated blood transfusions and is difficult to treat with medical therapy (7). The optimal
4 treatment of bleeding due to radiation proctitis is still controversial. Many medical therapies
5 including sucralfate, sulfasalazine or steroids have no satisfactory results. Currently, APC and
6 local application of formalin are being used as main successful measures for therapy of
7 radiation colitis, while APC treatment appears safer compared to formalin (8). APC is the
8 preferred method in patients with rectal bleeding associated with mild radiation proctitis,
9 while in cases of severe disease, multiple treatment sessions are required and success is less
10 certain (9). In resistant cases intrarectal formalin is a useful strategy, but it is a toxic agent and
11 may cause side-effects ranging from abdominal cramps, anal/perianal pain, self-limited
12 fissures, chemical colitis to strictures and fistula (10-12). Moreover, complete healing of
13 radiation colitis are not expected even with APC or formalin. The measurement of efficacy
14 with current treatments have been reported as decreased rectal bleeding, reduced transfusion
15 requirement, improvements in endoscopic appearance and patient quality of life (12).

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18 Recently, ABS as a new hemostatic agent have been reported in various gastrointestinal
19 scenarios, namely Dieulafoy lesion (3), solitary rectal ulcer (4) and neoplastic GI bleeding (5).
20 Upon application onto the injured area, it induces a specific hemostatic protein network which
21 stimulates erythrocyte aggregation (1). ABS may also offer an exciting option in the therapy
22 of radiation colitis, due to the ease of application, speed of action, non-toxicity and low cost.
23 It has a short procedure time and very simple technique (only spraying targeted or even
24 random close to bleeding area), and does not require expensive equipment like APC.
25 Moreover, it offers an advantage to other modalities as it does not require precise localisation
26 of the site of bleeding. Simple topical application over the whole lesion could suffice. Neither
27 any local adverse effect nor systemic toxicity was observed after the topical or even high-dose
28 application of ABS (2-5,13). Interestingly, as in our case, ABS was found to be useful not
29 only for local hemostasis, but also for wound healing after dental surgery (14). The full-blown
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3 effect and probable mechanism about wound healing are unknown yet. Although we showed
4 the beneficial effect of ABS on bleeding and somewhat healing of radiation colitis, we could
5 not fully define its optimal regimen and further advantages from a single experience. It may
6 be more effective as a daily dose(s) and may be more practical as enema or local tampon.
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11 Our case report showed that ABS is a promising hemostatic agent for severe radiation colitis.
12 Its advantages among various known measures are ease of use, no side effect and low cost.
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14 Further studies are needed to determine the full scope of ABS in the therapy of radiation
15 colitis for not only bleeding but also for complete healing. Optimal dosing, dose interval,
16 application method and comparison to other measures should be planned in those studies.
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FIGURE LEGENDS

Figure 1. Large ulcerated lesion involving the two-thirds of lumen at the rectosigmoid area. Edema, nodularity and fresh bleeding due to excessive friability were also seen.

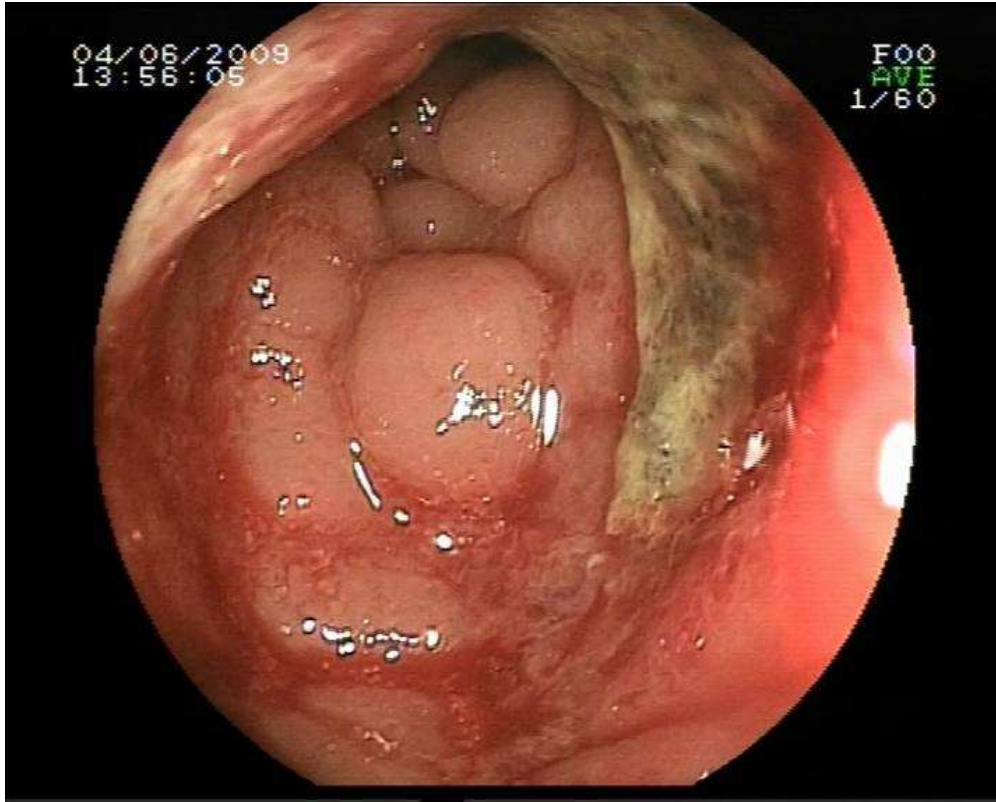
Figure 2 and 3: Bleeding stopped and greyish-yellow coagulum covered the diseased area within seconds after topical ABS application.

Figure 4. The appearance of healing ulcer at the following week.

Figure 5 and 6. Near complete healing of ulcerated areas, while some erosions and friability persisted at the fifth week of follow-up.

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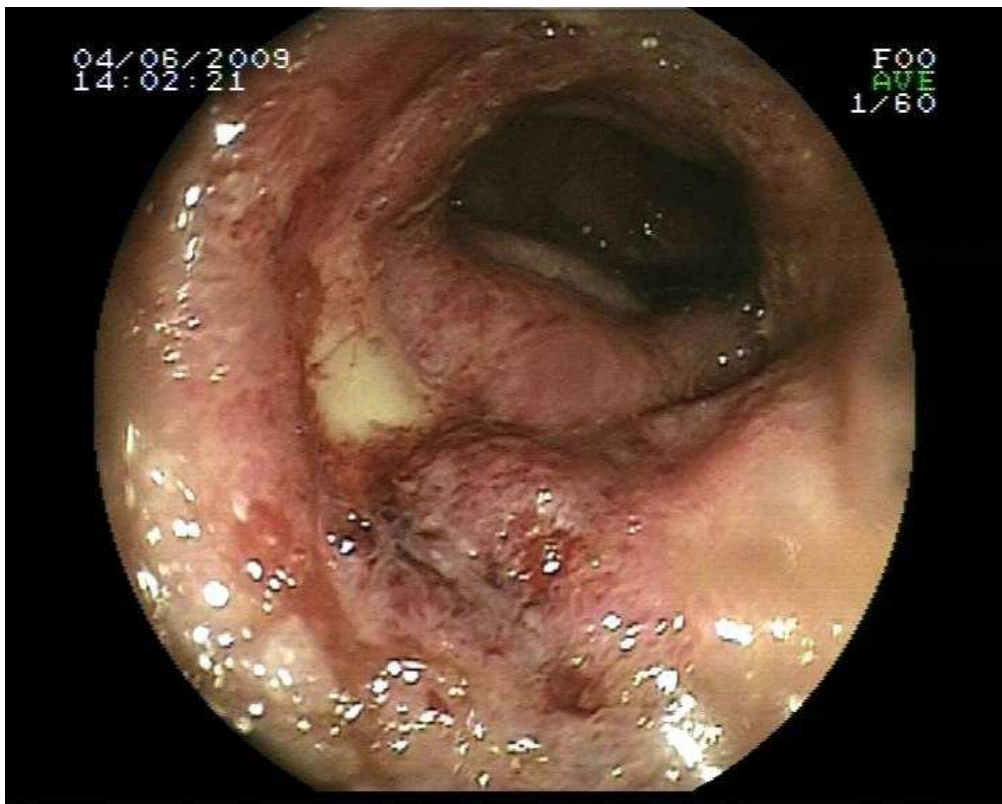
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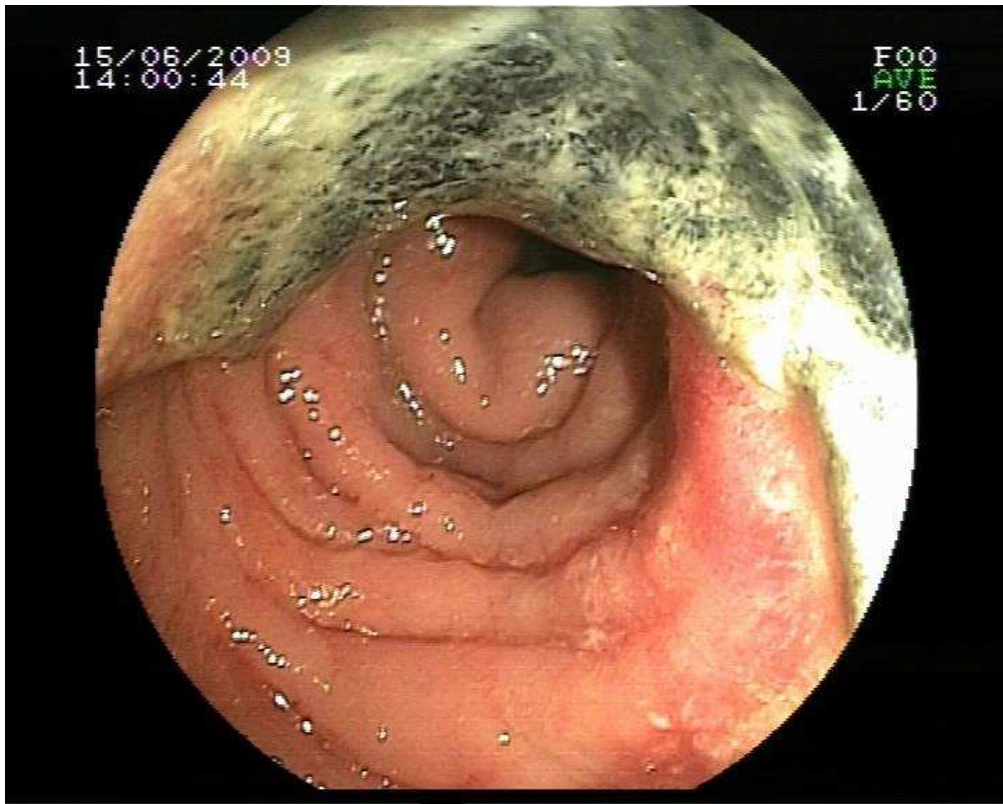
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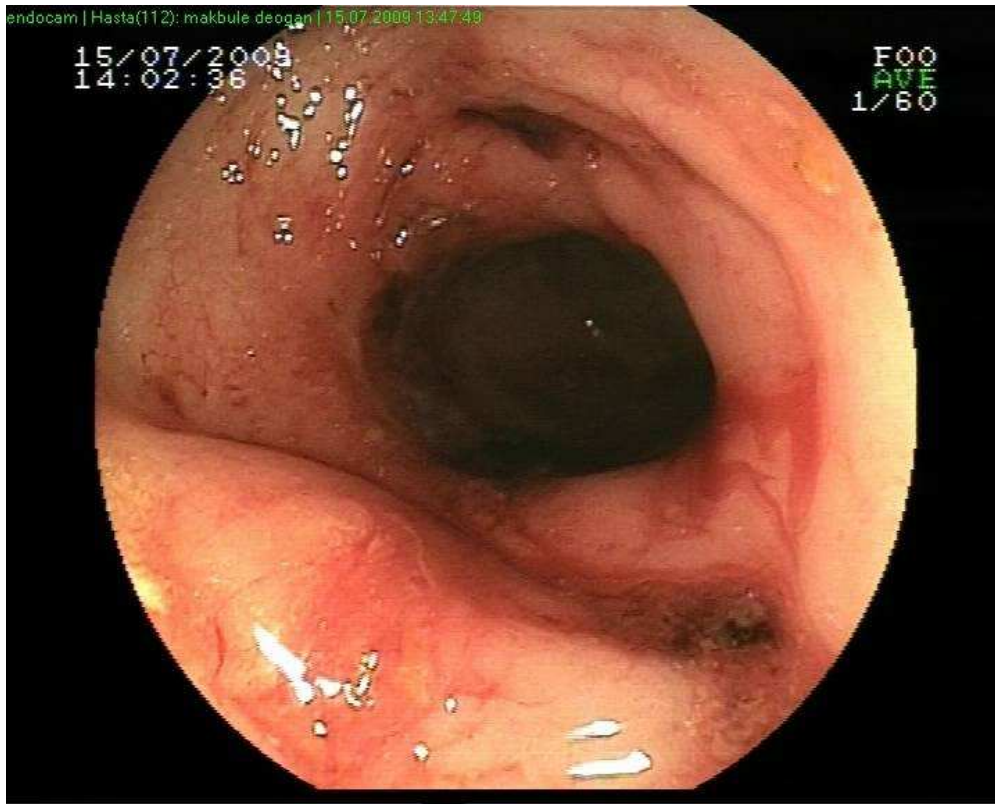
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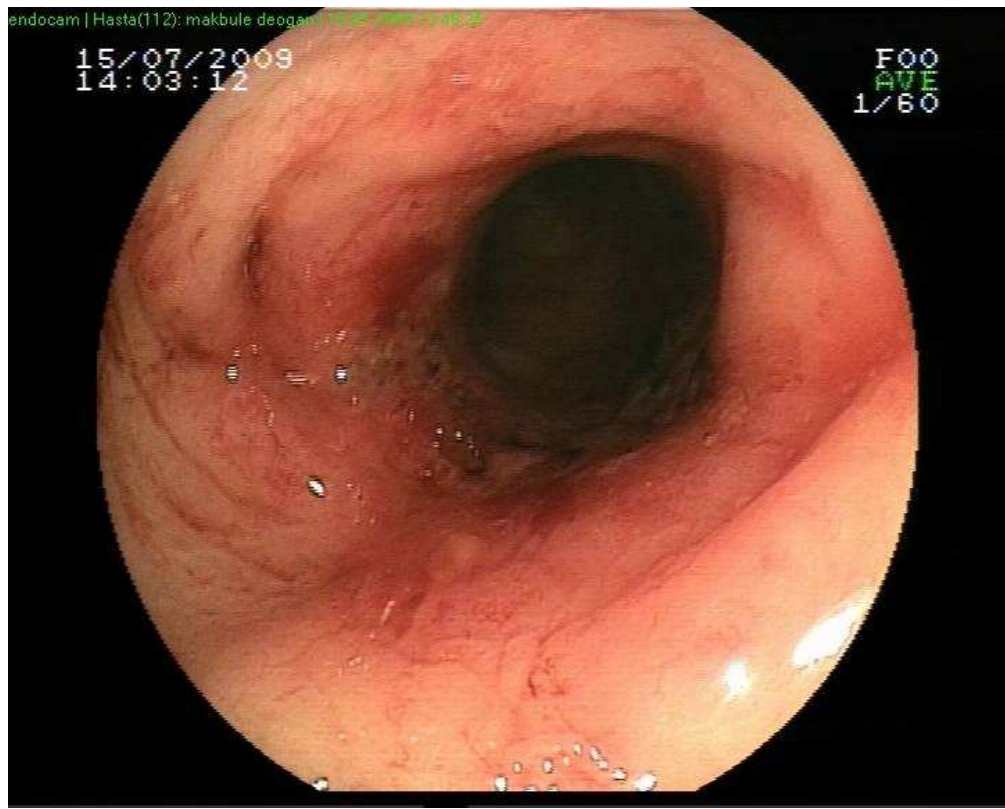
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