SINGLE TRANSCOLONOSCOPIC INFUSION OF THREE ANTI-PROTOZOAL AGENTS FOR DIFFICULT BLASTOCYSTIS HOMINIS INFECTIONS

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INTRODUCTION

Blastocystis hominis (Bh), is now recognized as an enteric pathogen, with presumptive evidence for Bh causing IBS-like symptoms. It is considered a common affliction but resistance has become of increasing concern. Despite recent treatment advances initial monotherapy typically consists of repeated and prolonged courses of metronidazole, with efficacy rates of only 0% - 49%. Nitazoxanide monotherapy, once deemed effective in 71% - 100% of patients, has recently become less effective. Furthermore high failure rate and consequent side effects result in poor patient compliance and development of resistant strains of Bh that become less responsive to oral therapy. Current treatments rely on oral multidrug regimens such as trimethoprim-sulfamethaxazole (TMP) and Doxycycline-Secnidazole. We developed an intracolonial administration of anti/protozoal agents which has the advantage of largely bypassing systemic absorption. We previously reported effective treatment of naive and resistant Bh using two consecutive colonic infusions of anti/protozoal agents; nitazoxanide, secnidazole and furazolidone. Here we asked whether a single transcolonoscopic infusion of anti/protozoal agents could simplify the procedure without compromising efficacy.

METHODS

Eighteen Bh positive patients (9M; 36-62yrs; 9F; 30-50yrs), 4 treatment naive and 14 treatment failures, were treated with a single transcolonoscopic infusion. Sixteen of the eighteen were infused with presumptive evidence for Dientamoeba fragilis (Df) positive patients (9M; 36-62yrs; 9F; 30-50yrs), 4 treatment failures, were treated with a single transcolonoscopic infusion. Sixteen of the eighteen were infused with presumptive evidence for Dientamoeba fragilis (Df) or Entamoeba hartmanni (Eh) (1). Minor side effects were reported in 22% of patients. Only ‘new’ symptoms were assessed as side effects and included nausea/vomiting (2/18) (Table 1).

CONFLICT OF INTEREST STATEMENT

Thomas J. Borody has a pecuniary interest in the Centre for Digestive Diseases and has filed patent applications in the parasite field.

REFERENCES

Nigro et al. (2003), A placebo-controlled treatment trial of Blastocystis hominis infection with metronidazole, J trav Med; 10(2):128-130.

RESULTS

Bh was eradicated in 100% of patients (18/18) (Graph 1). Of these 78% had failed multiple previous eradication attempts and 5/16 also eradicated their Dientamoeba fragilis (Df) (4) or Entamoeba hartmanni (Eh) (1) (Graph 1: Eradication rate for B.hominis and D. fragilis)

DISCUSSION

In this small series, we report 100% eradication rate Bh in 18 patients, using single transcolonoscopic infusion of anti protozoal agents. This eradication rate appears to be higher than our previously reported 2-day intra-colonic infusion of anti-parasite agents, which achieved 92% eradication rate, significantly higher than published eradication rates of difficult Bh for currently marketed oral anti-parasite therapies. Comparatively, patients infected with Df or Eh also achieved 100% eradication rate of their Df co-infection. No literature to date has reported successful eradication of both parasite infections using a single dose therapy. Furthermore, of these co-infected patients, 4/5 had previously failed therapy for Df or Eh.

In addition to its eradication success, the single transcolonoscopic infusion was also more tolerable than current therapies, which report nausea/vomiting incidence rate as high as 40%. Bh is especially difficult to eradicate in this particular sub-group of patients; those who are immunosuppressed (eg. AIDS, UC, Crohn’s), patients with chronic renal failure and renal transplant recipients. As a result they experience more side effects during oral treatment. Our colonic infusion is adequate for this sub-group as it bypasses systemic absorption, limiting side effects normally experienced with oral treatment and increases colonic concentration, subsequently not compromising efficacy.

CONCLUSIONS

Single transcolonoscopic anti protozoal infusion for difficult Bh infections acheives 100% eradication in a small cohort and deserves a formal comparative trial.

Table 1: Most common side effects reported during treatment

<table>
<thead>
<tr>
<th>Side effects</th>
<th>Percent reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nausea/vomiting</td>
<td>11%</td>
</tr>
<tr>
<td>Lethargy</td>
<td>0.05%</td>
</tr>
<tr>
<td>Abdominal pain/discomfort</td>
<td>0.05%</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>0.05%</td>
</tr>
<tr>
<td>Change in urine/stool colour</td>
<td>0.05%</td>
</tr>
</tbody>
</table>

All side effects reported by patients were mild and transient in nature, resolving upon cessation of therapy.