Effect of Single Dose of Secnidazole in Treatment of Intestinal Amoebiasis

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Introduction

Nitroimidazoles are highly potent antiprotozoal agents with well- established indications. Since the discovery of metronidazole, a member of this group, the treatment of amoebiasis has been revolutionized[1,2]. Despite its extreme potency against E-histolytica, metronidazole has to be taken for a relatively long penod (10 days) and hasvanous side effects including headache, metallic taste, nausea, diarrhoea and abdominal discomfort. Treatment failure are relatively common due to poor patient compliance[3]. Another mtroimidazole, namely (hydroxy-2-propyl) 1-methyl-2- nitro-5-imiolazole, (Secnidazole), with a molecular weight of 184.18, is the first of group which offers a 3-day antiprotozoal effect from a single dose. This pharmacokinetic characteristic explains the good activity of secnidazole against intestinal amoebiasis. We tried secnidazole in the treatment of intestinal amoebiasis in Shahid Faghihi Hospital of Shiraz.

Patients, Methods and Results

Twenty-two patients (mean age 32 years) with dysentery, tenesmus and bloody stool which were positive for trophozoite of E. histolytica, were entered in the study. Seven asymptomatic earners (mean age 38 years) were also included. Results of physical examination and pre-treatment symptoms such as abdominal pain, loose stool and hematochezia were recorded in detail. Stool specimens obtained were examined microscopically and cultured to confinn the diagnosis of acute and chronic amoebiasis. All patients were given 2 grains (4 tablets of 500 mg) of secnidazole in a single oral dose. They were instructed to record details of all complaints and side effects and were asked to return for re-examination and stool culture, three weeks after treatment. Responses to treatment were classified as “clinical cure” when all signs and symptoms disappeared and “parasitological cure” when stool cultures for amoeba were negative. Culture media were prepared with some modifications. Two cultures were used for each specimen. 30 mg of rice powder was added to both streptomycine and penicillins were added to just one of the media. Stool specimen was added to both media and incubated at 37°C for 24 hours.

Thirty-two patients (25 with acute and 7 with chronic amoebiasis) from Shahid Faghihi Hospital in Shiraz entered the study. Bloody stool (100%), abdominal pain (50%), tenesmus (45%) and bowel movement upto six times per day were the major complaints. Chronic carriers with cyst of E. histolytica in stool had no sign and symptom. After administration of secnidazole, there was significant improvement of symptoms. In all acute cases, the frequency of bowel movements decreased to once a day. Bloody stool and abdominal pain disappeared within 24-48 hours. On parasitological examination only 1 (16%) out of 7 patients with chronic amebiasis had positive stool culture three weeks after treatment while all other were negative. None of the side effects which are common with nitroimidazole derivatives like nausea, vomiting, vertigo, ataxia and metallic taste, were observed in our patients.

Comments

Secnidazole, the newest among the mtroimidazole group, has a much longerhaif life compared to metronidazole, tinidazole and ormidazole[4]. The results of present study confirm the previous reports on effectiveness of single dose of secnidazole in relieving clinical symptoms with high parasitological cure rate in patients with acute and chronic amoebiasis[5-9]. However, compared to widely used drugs such as metromdazole with long duration of treatment and the side effects, which have significant disadvantages to their use[10], secnidazole appears to be superior due to the single dose of the drug and better compliance and lack of untoward side effects.

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