Journal of Population Therapeutics & Clinical Pharmacology

RESEARCH ARTICLE
DOI: 10.53555/jptcp.v31i3.4785

SHORT COURSE VS PROLONGED RIFAXIMIN THERAPY FOR POST INFECTIOUS IRRITABLE BOWEL SYNDROME

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ABSTRACT

BACKGROUND: The treatment of irritable bowel syndrome has evolved over the last so many years ranging from simple conservative measures to medications such as rifaximin.[1]

OBJECTIVE: To compare the effectiveness of short course vs prolonged rifaximin for post infectious irritable bowel syndrome.

MATERIAL AND METHODS: This study was conducted in MMC General Hospital Peshawar after the scrutiny and proper approval of the proposal from the ethical review of the committee of the hospital. The patients of IBS diagnosed according to the modified Rome criteria were in the inclusion criteria and patients having diarrhea die to other causes such as celiac disease, crohns diseases, ulcerative colitis was excluded from the study. A sample size of 50 was taken and method used was non-probability convenient sampling. The responses of the participants were recorded through a validated questionnaire comparing the symptoms with short course and long course of Rifaximin. The data was analyzed by SPSS version 22. Descriptive statistics were applied and the frequencies and percentages were applied were applied for categorical data whereas Mean and SD were applied for quantitative data. Results: The mean age of the patients was 32 years with males affected more as compared to females .The mean differences for stool frequency of stools was 0.4800 ,standard error of mean 0.164 ,confidence ranging from 0.811 to 0.148 and a very statistically significant value of 0.005 .Similarly for stool consistency and flatulence the mean differences 0.34 and 0.38 ,confidence interval ranging from 0.95 to 0.48 and 0.50 to 0.16 and highly statistically significant p values of 0.020 and 0.025 respectively.

CONCLUSION: So the long term rifaxmin therapy has better results for various symptoms of IBS.

Keywords: celiac disease, ulcerative colitis

INTRODUCION:

Irritable bowel syndrome has puzzled physicians and gastroenterologists for the last so any years as the patients do suffer from complex mental health issues apart from having typical symptoms of the bloating ,changed bowel habits, flatulence , disturbance in sleep cycles and other issues related to depression .[2]The conceptual framework of the IBS pathogenesis includes visceral hypersensivity of the gut ,brain gut interaction and in some cases a positive family history with siblings or first degree relatives having it. [3]The crus of the problem are difficult to ascertain as irritable bowel syndrome presents in various forms and manifestations.[4]

It has been a documented fact that IBS has affected the life of individuals suffering from it to a colossal extent. It has economic consequences for the patients and the hospitals both especially in the west where there has been a lot of losses due to the sickness leaves of the employees affecting the working routine and environment. [5]The patients are extensively investigated ranging from simple blood tests like full blood count, ESR, CRP to invasive investigations like colonoscopy for alarm symptoms such as bleeding per rectum, unintentional weight loss, and a positive family history of colorectal carcinoma.[6]

Post infectious irritable bowel syndrome has been even more challenging to treat as patient does require antibiotic despite of the fact there are increasing rates of resistance and exact modality of choice does require needs sending the blood culture and sensitivity for determining the most effective one.[7] This along with other modalities such as cognitive behavioral therapy, interpersonal therapy, probiotics and excellent counselling by a trained psychologist forms the cornerstone of treatment for IBS.While there are conflicting results on optimum duration of rifaximin for IBS as most of the studies suggesting a short course of few days for treatment of IBS just for travelers' diarrhea. [8]While few has reported better results with increasing days of the therapy the goal of the therapy is to reduce the frequency of the symptoms, stools constancy, alleviate the depressive symptoms such as tendency to cry, emotional spells and hence improving the quality of life .[9]

MATERIAL AND METHODS:

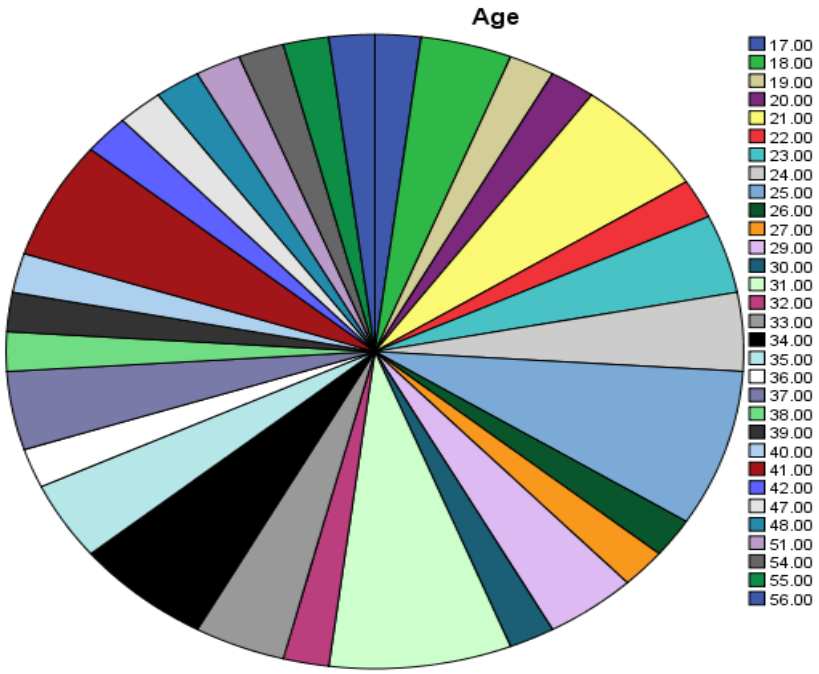
This study was conducted in MMC General Hospital Peshawar after the scrutiny and proper approval of the proposal from the ethical review of the committee of the hospital. The patients of IBS diagnosed according to the modified Rome criteria were in the inclusion criteria and patients having diarrhea die to other causes such as celiac disease, crohns diseases, ulcerative colitis was excluded from the study. A sample size of 50 was taken and method used was non-probability convenient sampling. The responses of the participants were recorded through a validated questionnaire comparing the symptoms with short course and long course of Rifaximin. They were given 2-week course of rifaximin 550 mg TID,followed by additional weeks of treatment according to the guidelines The data was analyzed by SPSS version 22. Descriptive statistics were applied and the frequencies and percentages were applied were applied for categorical data whereas Mean and SD were applied for quantitative data. Paired T test was used to compare the change in the symptoms with short and long course of treatment and p value of less than 0.05 was considered as significant.

RESULTS:

The mean age of the patients was 32 years with males affected more as compared to females .The mean differences for stool frequency of stools was 0.4800 ,standard error of mean 0.164 ,confidence ranging from 0.811 to 0.148 and a very statistically significant value of 0.005 .Similarly for stool consistency and flatulence the mean differences 0.34 and 0.38 ,confidence interval ranging from 0.95 to 0.48 and 0.50 to 0.16 and highly statistically significant p values of 0.020 and 0.025 respectively .Almost identical results were seen for symptoms such as nausea and pain persistence with statistically significant p values.

Descriptive Statistics

	N	Minimum	Maximum	Mean
Age	50	17.00	56.00	32.1800
Valid N (listwise)	50			



Paired Samples Test

	Paired Differences					t	Df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1 StoolFrequency – StoolFrequency2	.48000	1.16479	.16473	.14897	.81103	2.914	49	.005
Pair 2 Wellbeing – Wellbeing2	.34000	1.00224	.14174	.05517	.62483	2.399	49	.020
Pair 3 StoolConsistency – StoolConsistency2	.72000	.83397	.11794	.48299	.95701	6.105	49	.000
Pair 4 BloodInStool – BloodInstool2	-.02000	.37742	.05338	-.12726	.08726	-.375	49	.709
Pair 5 Flatulence - Flatulence2	.38000	1.15864	.16386	.05072	.70928	2.319	49	.025
Pair 6 PainPersistency – PainIntensity2	.44000	2.47568	.35011	-.26358	1.14358	1.257	49	.215
Pair 7 PainPersistency – Painperistency2	.68000	1.73134	.24485	.18796	1.17204	2.777	49	.008
Pair 8 Nausea - Nausea2	.80000	.85714	.12122	.55640	1.04360	6.600	49	.000

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	StoolFrequency& StoolFrequency2	50	-.251	.079
Pair 2	Wellbeing & Wellbeing2	50	-.024	.867
Pair 3	Stool Consistency& StoolConsistency2	50	-.122	.397
Pair 4	BloodInStool & BloodInstool2	50	.287	.043
Pair 5	Flatulence & Flatulence2	50	.108	.457
Pair 6	PainPersistency & PainIntensity2	50	-.018	.903
Pair 7	PainPersistency & Painperistency2	50	.189	.190
Pair 8	Nausea & Nausea2	50	.281	.048

DISCUSSION:

The mean differences for stool frequency of stools was 0.4800,standard error of mean 0.164, confidence ranging from 0.811 to 0.148 and a very statistically significant value of 0.005 .Similarly for stool consistency and flatulence the mean differences 0.34 and 0.38 ,confidence interval ranging from 0.95 to 0.48 and 0.50 to 0.16 and highly statistically significant p values of 0.020 and 0.025 respectively

In 2011 two randomized controlled trial which were double blind along with a placebo proved that rifaximin therapy cause remarkable improvement in symptoms of IBS-D type including the troublesome abdominal pain which bothers the patient so much. Out of total 2438 patients 56.8% had an improvement of abdominal pains with more than 30% relief after first four weeks of treatment with a dose of Rifaximin TDS for 2 weeks vs placebo with a pvalue of less than 0.001. A repeat of the trial treatment (trial3) further strengthened the support for the use of this drug for a duration of 2weeks for the treatment of irritable bowel syndrome.[10]

Increase in the urgency of the stools is one of the most irritating symptoms of IBS. A greater percentage of patients treated with double blind rifaximin were showing adequate response using a threshold of more than 30% and 40% improvement in symptoms from the baseline. This is in with the guidance from FDA which defines clinical abdominal pain response more than 30% from the baseline as far as theme an pain score is concerned.[11]

According to another study published in New England Journal of Medicine by Mark Pimentel with an aim of evaluating rifaximin as treatment of IBS concluded that significant greater number of patients in the treatment group had considerable improvement as compared to placebo had great relief of complains during first four weeks of treatment 40.8% vs 31.2% with a p value of 0.03 though the adverse effects were identical in both the groups. The symptoms which were improved were bloating abdominal pain and stools consistency.[12]

Another systematic review about the efficacy of rifaximin for the treatment of IBS strongly advocated itsusedue to its demonstrated efficacy with a recommendation to conduct more randomized controlled trials and metanalysis with an aim to enhance the quality of life of all individuals with IBS.[13]

The small size and that fact that study was done in a single hospital setting indicates more studies with a larger sample size should done to further reinforce our results .

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