

REVIEW OF 100 CASES OF INTESTINAL AMOEBIASIS IN SWAT

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ABSTRACT

Objective: The objective of this study was to find out the frequency of intestinal amoebiasis and the evaluation of clinical features and effectiveness of therapy in such patients.

Material and Methods: This study was conducted in Saidu Group of Teaching Hospitals Swat from April to August 2001. An analysis of 100 patients with abdominal symptoms was done. Stool examination was performed by a specially trained technician.

Results: The stools were reported positive for *Entamoeba histolytica* in 70 % of patients. These patients usually presented with chronic, low-grade upper abdominal pain and vague general abdominal discomfort, belching and flatulence. Bowel habits varied from continuous diarrhea to constipation alone. Frank dysentery with blood and mucous was rare. Results of treatment were good.

Conclusion: The frequency of amoebiasis is high in Swat and stool examination may be diagnostic in majority of cases.

Key words: Intestinal Amoebiasis, *Entamoeba Histolytica*, Dysentery

INTRODUCTION

Amoebiasis is defined as “state of an individual who harbors *Entamoeba Histolytica* irrespective of presence or absence of symptoms” while 'Invasive Intestinal Amoebiasis' is a disease in which haematophagous trophozoites of *Entamoeba Histolytica* are seen in the stool. In other words “infection” is not synonymous with “disease”. Moreover, the very widely held misconception among many doctors, and non-doctor health workers that 'dysentery' is the only manifestation of intestinal Amoebiasis is wrong. Instead, dysentery is just one of the diverse manifestations of the disease which ranges from 'frank bloody diarrhea' to 'constipation' alone.

Food handlers are a very important source of infection.¹⁻³ Infection spreads through *Entamoeba Histolytica* cysts, which can remain viable at 48°C for several days, in cool faeces for 12 days. High temperature is more lethal⁴ and cysts are killed above 50°C. Desiccation and temp below 50C, humidity being favourable, also destroy them. Cysts are resistant to chlorination of water⁵, as commonly practiced.

Simple, post-purge fresh stool examination is the best recognized method of finding *Entamoeba Histolytica* trophozoites in the stool by

trained staff.^{6,7} The objective of this study was highlight the difference between the apparent and actual incidence of intestinal amoebiasis and the evaluation of clinical features and effectiveness of therapy in such patients.

MATERIAL AND METHODS

Study comprised analysis of record of 100 patients from the authors' own practice containing brief history and clinical features of each patient along with investigations and follow-up. The study included consecutive patients with abdominal symptoms (except acute abdomen). A specific laboratory was selected for stool examination, where the technician concerned was an expert in recognition and identification of *Entamoeba Histolytica*. On numerous occasions, personal confirmation and confirmation by the pathologist was assured. Microphotographs on numerous occasions were taken as proof of correct identification.

A criterion for diagnosis of Invasive Intestinal Amoebiasis was only a “positive” fresh stool examination. A stool was declared positive” for Invasive Intestinal Amoebiasis only if hematophagous *Entamoeba histolytica* were seen under the microscope. The most important generally accepted criteria of identification of

BOWEL HABITS

1	Normal	54%
2	Intermittent diarrhea.	19%
3	Constipation only.	16%
4	Diarrhea and Constipation.	6%
5	Continuous diarrhea.	5%
		100%

Table 1

Entamoeba Histolytica are (1) clear pseudopodia (2) ingested RBC,s (3) progressive directional crawl & (4) specific nucleus. Every patient also had his blood & urine routine examination done. Precysts and cysts of Entamoeba Histolytica were not considered for the purpose of study. All adult patients with Invasive Intestinal Amoebiasis were prescribed Metronidazole 400 mg (t.d.s) and Diloxonide furoate for 7 days. Those patients, who reported back after therapy were asked about their improvement / deterioration in previous symptomatology and notes made in their respective cards. Stool examination was repeated if needed.

RESULTS

Out of 100 patients with diverse abdominal complaints 70 patients (70.0%) were "stool positive" for Haematophagous entamoeba Histolytica or in other words these patients were suffering from Invasive Intestinal Amoebiasis while 30 patients (30%) were "stool negative". Male to female ratio was 1.7:1. Maximum cases were present in the age group of 21-50 years (33%) while a total of 75% of patients were present in the 21-50 years of age group. 67% of the patients in this study belonged to the middle socio-economic classes.

15 % (15 patients) of the stool positive patients complained of 'gas' in the abdomen while 3.0 % complained of a feeling of moving "gola" (an ill defined mass in the abdomen.) Some of the other features described by most of the stool positive patients (50%) were fullness, foul swelling flatus, belching, indigestion, epigastric burning and vague abdominal discomfort.

Fifty patients had pain abdomen, out of these 32 patients had epigastric pain. Table 2 shows the dominant site of pain.

54 % of the patients had normal bowel

SITE OF ABDOMINAL PAIN

Site of Pain	Frequency	%age
Generalized pain abdomen.	13	26%
Pain upper abdomen.	32	64%
Pain lower abdomen.	05	10%
	50	100%

Table 2

CHARACTER OF ABDOMINAL PAIN

Colicky	23%
Dull continuous.	65%
Sharp.	12%
	100%

Table 3

habits while 24 % had intermittent or continuous diarrhea and 6% had constipation alone (Table-I).

Twenty percent of the stool positive patients had tenderness, predominantly in the lower abdomen. Of these 14.0% had it on the right side while 6 % had tenderness on the left side, predominantly in the sigmoid region. Fourteen patients (14% of stool positive patients) had a palpable (1-2 fingers), tender liver with no evidence of abscess.

No significant abnormality in routine examination of blood was found in stool positive patients who had no other concomitant disease. Moreover no significant difference in hemoglobin was found in stool positive and negative patients. In as many as 47% of the stool positive patients the eosinophils count in blood was 4% or above.

Out of 70 stool positive patients 17 also had ova's of different worms (viz. Roundworm, tapeworm, Hookworm etc.) and Giardiasis.

Patients were advised to report back after completion of anti-amoebic treatment. Table 9 is showing analysis of 39 patients (39 %) who were stool positive initially and who reported back within a month's time after starting therapy.

Stool examination was repeated in the cases where deemed necessary due to any

SEVERITY OF ABDOMINAL PAIN

Mild	46%
Moderate.	25%
Severe.	29%
	100%

Table 4

suggestive clinical features.

DISCUSSION

According to the results E. histolytica involved 70 % of patients belonging to an average

DURATION OF ABDOMINAL PAIN

1 Month or less	14%
2 Months to 1 year.	40%
More than 1 year	46%
	100%

Table 5

CONSISTENCY OF STOOLS

Watery.	34%
Semi solid.	19%
Solid.	47%
	100%

Table 6

socioeconomic class having diverse abdominal symptoms, mostly diarrhea, pain, constipation, distension, etc. These complaints are very frequent in our country more so in the poor socio-economic class. According to a WHO report amoebic infection is ten times commoner than invasive disease⁸ suggesting that infection rates are fairly high in our country. Incidence of Amoebic infection in tropical countries has been reported to be 80%⁹ or higher. In Pakistan where circumstances are favourable for Amoebiasis even the good socioeconomic class is hardly at any less risk than the poor one or the 70% of population living in the rural areas.

In this study more men were suffering from invasive intestinal Amoebiasis owing probably due to their occupation and hobbies¹⁰. Seventy five % of cases presented were between 21-50 years, 33% between 21 to 30 years. Children comprised a very little percentage; probably they have less opportunity and less time to acquire the infection.

Whatever may be the infection rate proper stool examination is necessary for diagnosis. The apparent discrepancy between the usual negative report, as mentioned in the introduction, and the 70% positive report in the series is explained by:

- a) The selection of the specimen by the patient (which consists of solid or semi-solid faecal contents only where as Entamoeba Histolytica reside in the colonic crypts).
- b) Delay in transport to the laboratory.
- c) Further delay in the laboratory.
- d) In-experience or casualness of the laboratory staff towards the immediate examination of fresh warm stool (passed in the laboratory).

In proven cases first stool is positive in 30 % of cases while 3-6 examinations are successful in 98%¹¹. Serological tests give a positive titer for acute disease¹² but since positive titers may exits for months and years even after successful treatment it is difficult to differentiate between

NATURE OF STOOLS

Mucous in stool.	09%
Blood in stool (Naked eye)	02%
	11%

Table 7

ENTAMOEBA HISTOLYTICA IN STOOLS

	No. of patients.	Percentage
EHH (<2 per field).	64	64%
EHH (1-2 per field).	36	36%
Total	100	100%

EHH- Haematophagus Entamoeba Histolytica.

Table 8

recent and past infection and in endemic areas a positive titer is very common in the absence of symptoms. A proctoscopy detects about 30% of cases¹¹ and need not be performed in every patient with suspicion of intestinal Amoebiasis. Hence proper stool examination remains to be the most useful and the cheapest diagnostic method for invasive intestinal Amoebiasis. As many as 54.7% of stool positive patients had normal bowel habits while 29% had intermittent or continuous diarrhea and 16.3% had constipation alone (Table 1). During the past 50 years several researchers have emphasized constipation as an outstanding symptom in many cases of Amoebiasis.

In a patient with invasive intestinal Amoebiasis and normal bowel habits, pain, distension, epigastric distress, etc. were the outstanding symptoms. 64.% had predominant epigastric pain. Distension is an important symptom of Amoebiasis. Most of the patients in the analysis had chronic, mild, dull, continuous pain (Table 3,4,5). The mild symptoms and normal bowel habits in most of the patients instead of frank dysentery is due to easily availability of drugs at stores which is frequently taken in dosage insufficient to fully cure the disease but sufficient enough to suppress the severity of symptoms.

Contrary to the commoner belief, 66% of patients with Invasive Intestinal Amoebiasis (11A) in this series had solid or semi-solid consistency of stool (Table 6) and only 2.8% complained of blood in stool (Table 7), owing to the fact that fulminating disease is rare at least at places where medicine is available.

Brown et al¹³ described a frequent type of Amoebiasis manifested by irregular bowel action, without frank diarrhea and with enterospastic symptoms. 33.9% of patients complained of frequent watery stools (Table 6) "Amoebiasis may

POST-TREATMENT IMPROVEMENT

Complete relief	09%
Significant relief	62%
No improvement	26%
Deterioration	03%
	100%

Table 9

be misdiagnosed as the irritable bowel syndrome. Mild symptoms may persist for months or years and then disappear or spontaneously develop into fulmination dysentery.

As many as 14% of stool positive patients had a palpable tender liver owing perhaps due to non-specific periportal inflammation described in a proportion of patients with Invasive Intestinal Amoebiasis 47.2% of patients with Invasive Intestinal Amoebiasis had eosinophilia (4% or above) but whether it was a feature of Amoebiasis is not certain. 25% of patients with Invasive Intestinal Amoebiasis had worm infestation. Only 39.7% of the total patients with Invasive Intestinal Amoebiasis reported back for check up within 10 days after finishing anti-amoebic treatment and of these 72% reported relief of symptoms (Table 9) which is a satisfactory outcome. Relapse rate of I.I.A was 11.7% in patients who reported back after two months owing to the fact that probability of re-infection is great in an area with high incidence of disease.

We conclude that incidence of Invasive Intestinal Amoebiasis is underestimated due to improper stool examination by untrained staff. Clinical Picture at least in big cities is different from the usually accepted concept of "dysentery". Symptomatic relief is significant with treatment.

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