North Asian International Research Journal of Pharmaceutical & Medical Sciences

ISSN: 2456-8287 Vol. 3, Issue-1 January-2019

Index Copernicus Value: 49.75 Fulfill MCI Guidelines Thomson Reuters ID: S-8304-2016

A Peer Reviewed Refereed Journal

A DETAILED STUDY OF VARIOUS GRADES OF ANAEMIA IN PATIENTS WITH HOOKWORM INFECTION DIAGNOSED BY DOING UPPER GASTRO INTESTINAL ENDOSCOPY

GOVINDARAJALU GANESAN*

****Associate professor, Dept. of General surgery, Indira Gandhi Medical College and Research Institute, Puducherry.-605009***

ABSTRACT:

Objective: Anaemia is commonly reported to occur in hookworm infection. Hence a detailed study was done to know about the various grades of anaemia in patients with hookworm infection diagnosed by doing upper gastro intestinal endoscopy.

Methods: A study of 1307 patients who had undergone upper gastro-intestinal endoscopy for a period of 5yearsand one month from May 2009 to May 2014 was carried out to know about the various grades of anaemia in patients with hookworm infection diagnosed by doing upper gastro intestinal endoscopy.

Results: Out of these 1307 patients, 14 patients found to have hookworms in duodenum while doing upper gastro-intestinal endoscopy were taken into consideration for our study. Out of these14 patients with hookworms in duodenum, 5patients did not have anaemia, 6patientshad mild anaemia,1patient had moderate anaemia and 2 patients were found to have severe anaemia .Hence11outof 14patientswithhookworms in duodenum had absence of anaemia and mild anaemia. Hence majority of the patients with hookworms in duodenum were in the early stage of hookworm infection in our study since11outof 14patientshad absence of anaemia and only mild anaemia. Only 3outof 14patientswithhookworms in duodenum had moderate anaemia and severe anaemia. Hence only few patients with hookworms in duodenum were in the late stage of hookworm infectionin our study since only3outof 14patientshadmoderate anaemia and severe anaemia.

Conclusion: Hence majority of the patients with hookworms in duodenum were in the early stage of hookworm infection in our study. Only few patients with hookworms in duodenum were in the late stage of hookworm infection in our study.

Keywords: various grades of anaemia, hookworms in duodenum, upper gastro intestinal endoscopy

INTRODUCTION:

Anaemia is commonly reported to occur in hookworm infection (1to 16).Hence a detailed study was done to know about the various grades of anaemia in patients with hookworm infection diagnosed by doing upper gastro intestinal endoscopy.

MATERIALS AND METHODS:

This study was conducted in the department of general surgery, Aarupadai Veedu Medical College And Hospital, Puducherry. A study of 1307 patients who had undergone upper gastro-intestinal endoscopy for a period of 5yearsand one month from May 2009 to May 2014 was carried out. In each of these 1307 patients, the first and second part of duodenum was carefully examined to find out the presence of hookworms. In all the patients found to have hookworms in duodenum, investigations were done to know about the presence or absence of anaemia and to know about the various grades of anaemia in patients with hookworm infection diagnosed while doing upper gastro intestinal endoscopy. Anaemia is defined as hemoglobin <12g/dl or 12g% in women and hemoglobin or < 13g/dl or13g% in men. Mild anaemia is taken as hemoglobin 10to12g/dl or g%, moderate anaemia is taken as haemoglobin 7to10g/dl or g% and severe anaemia is taken as hemoglobin<7g/dl or g% .The results were found as given below.

RESULTS:

1.Out of these 1307 patients, 14 patients found to have hookworms in duodenum while doing upper gastro-intestinal endoscopy were taken into consideration for our study.

2.Out of these14 patients with hookworms in duodenum taken into consideration for our study.

a.5patients did not have anaemia [hemoglobin>13g/dl in men and hemoglobin>12g/dl in women].

b.6patientshad mild anaemia [haemoglobin10to12g/dl]

c.1patient had moderate anaemia [haemoglobin7to10g/dl]

d. 2patientswere found to have severe anaemia [hemoglobin<7g/dl] .

3. 11outof 14patientswithhookworms in duodenum had absence of anaemia and only mild anaemia.

4.Only3outof 14patientswithhookworms in duodenum had moderate anaemia and severe anaemia.

DISCUSSION:

Absence of anaemia

Outof the14 patients with hookworms in duodenum taken into consideration for our study, 5patients did not have anaemia [haemoglobin>13g/dl in men and haemoglobin>12g/dl in women].

Single hookworm in duodenumseen in one of these patients with absence of anaemia [haemoglobin 17.6g%]is shown in Fig 1.

The hookworm in duodenum is identified by its bent head which looks like a hook (Fig 1) and by its S-shaped appearance (13) (Fig 1).

Mild anaemia

Out of the14 patients with hookworms in duodenum taken into consideration for our study,6patientshad mild anaemia [haemoglobin10to12g/dl] .

Single hookworm in duodenumseen in one of these patients with mild anaemia [haemoglobin 10g/dlor g %]is shown in Fig 2.

The hookworm in duodenum is identified by its bent head which looks like a hook (Fig 1) and by its S-shaped appearance(13) (Fig 1).

Moderate anaemia

Outof the14 patients with hookworms in duodenum taken into consideration for our study, only 1 patient had moderate anaemia[haemoglobin7to10g/dl].

Severe anaemia

Out of the14 patients with hookworms in duodenum taken into consideration for our study,only2 patients were found to have severe anaemia [haemoglobin<7g/dl] .

Multiple hookworms in duodenum seen in one of these 2 patients with severe anaemia [haemoglobin 3.2 g/dlorg %] is shown in fig 3.

Hence11outof 14patients(79%) withhookworms in duodenum had absence of anaemia and mild anaemia.

But only 3outof 14patients(21%) withhookworms in duodenum had moderate anaemiaandsevereanaemia.

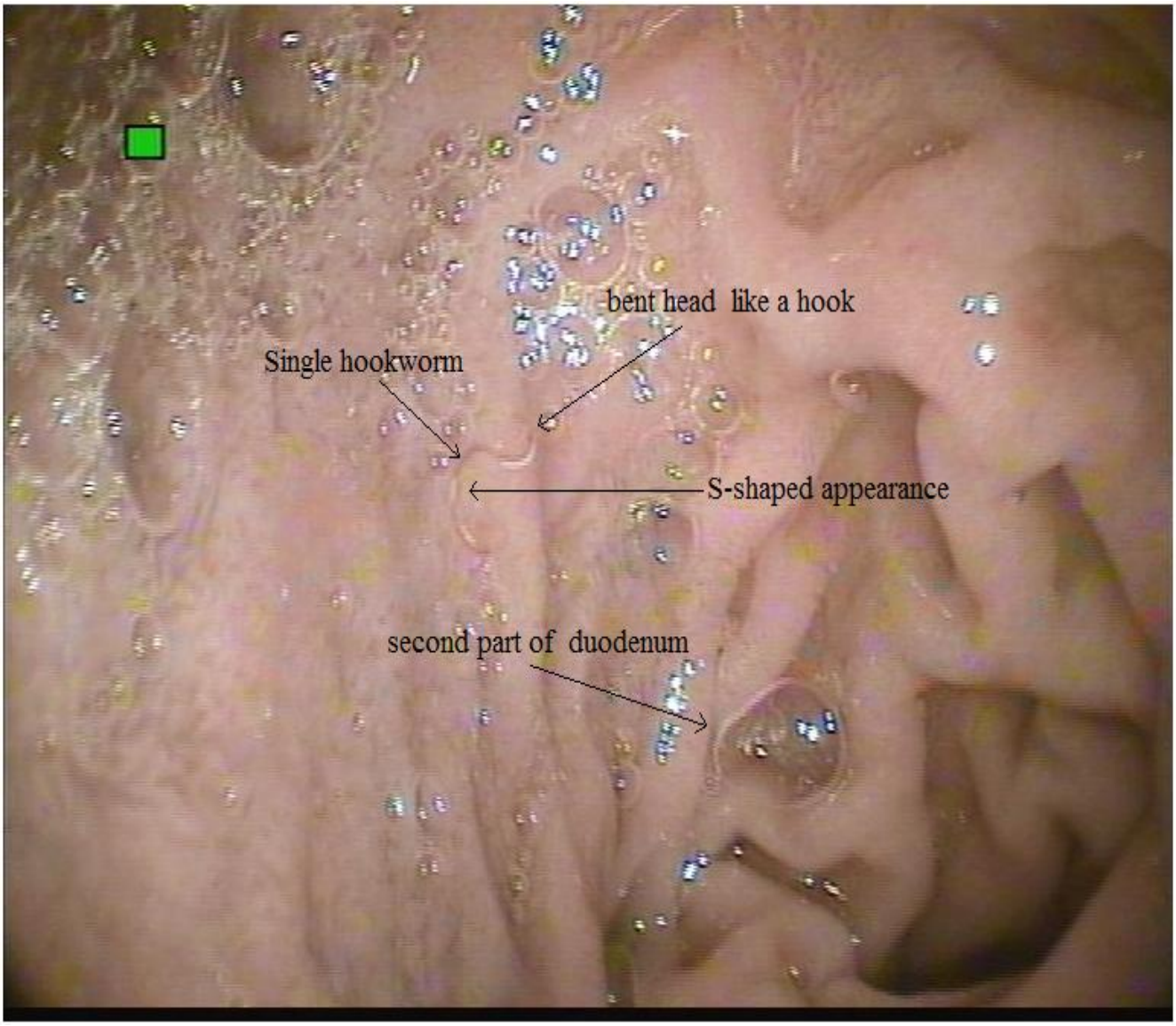

Fig1: Single hookworm in duodenum with its bent head and S-shaped appear ancient patient Without anaemia [haemoglobin 17.6g%]

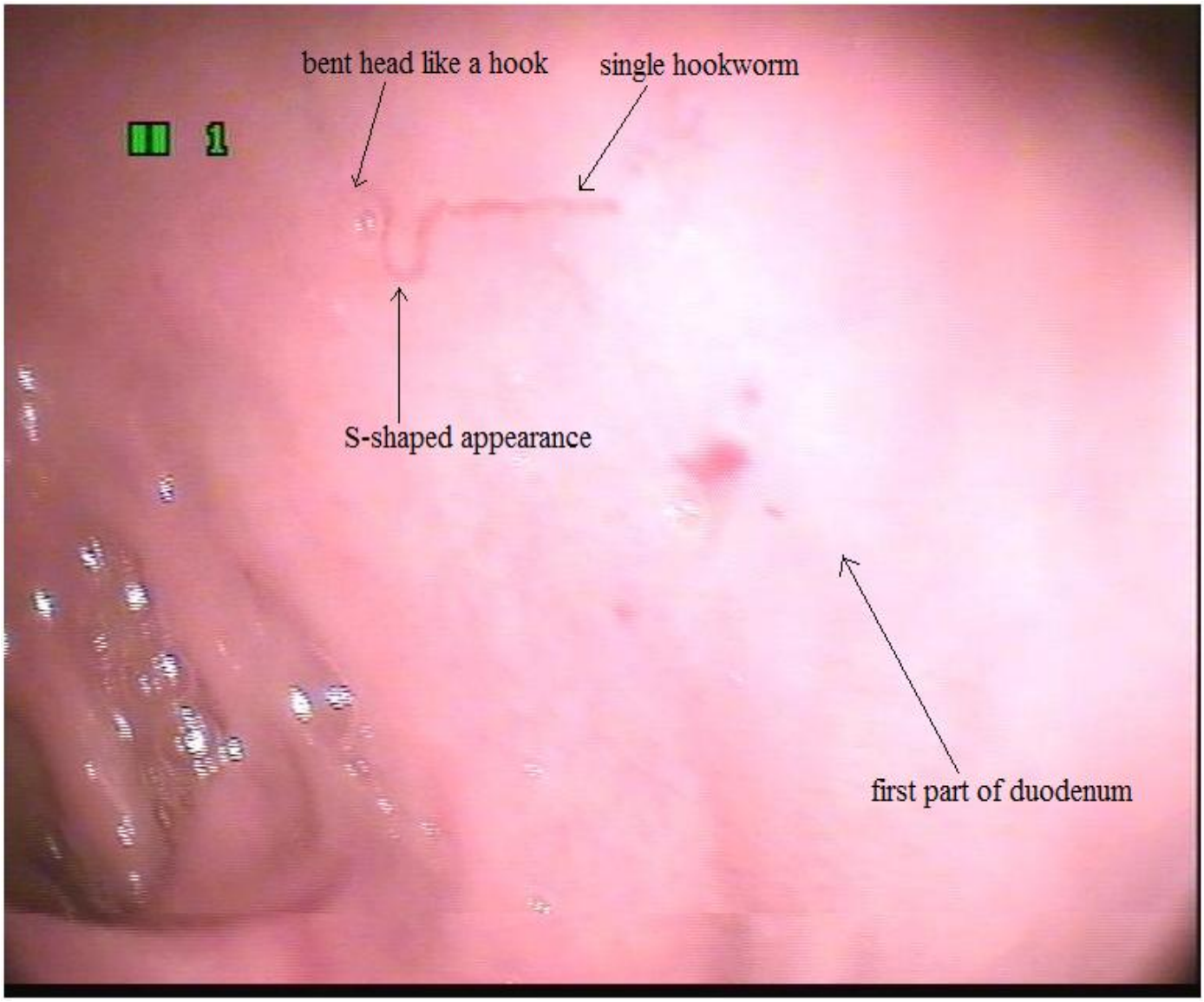

Fig2:Single hookworm in duodenum with its bent head like a hook and S-shaped appearance In a patient with mild anaemia [haemoglobin 10 g%]

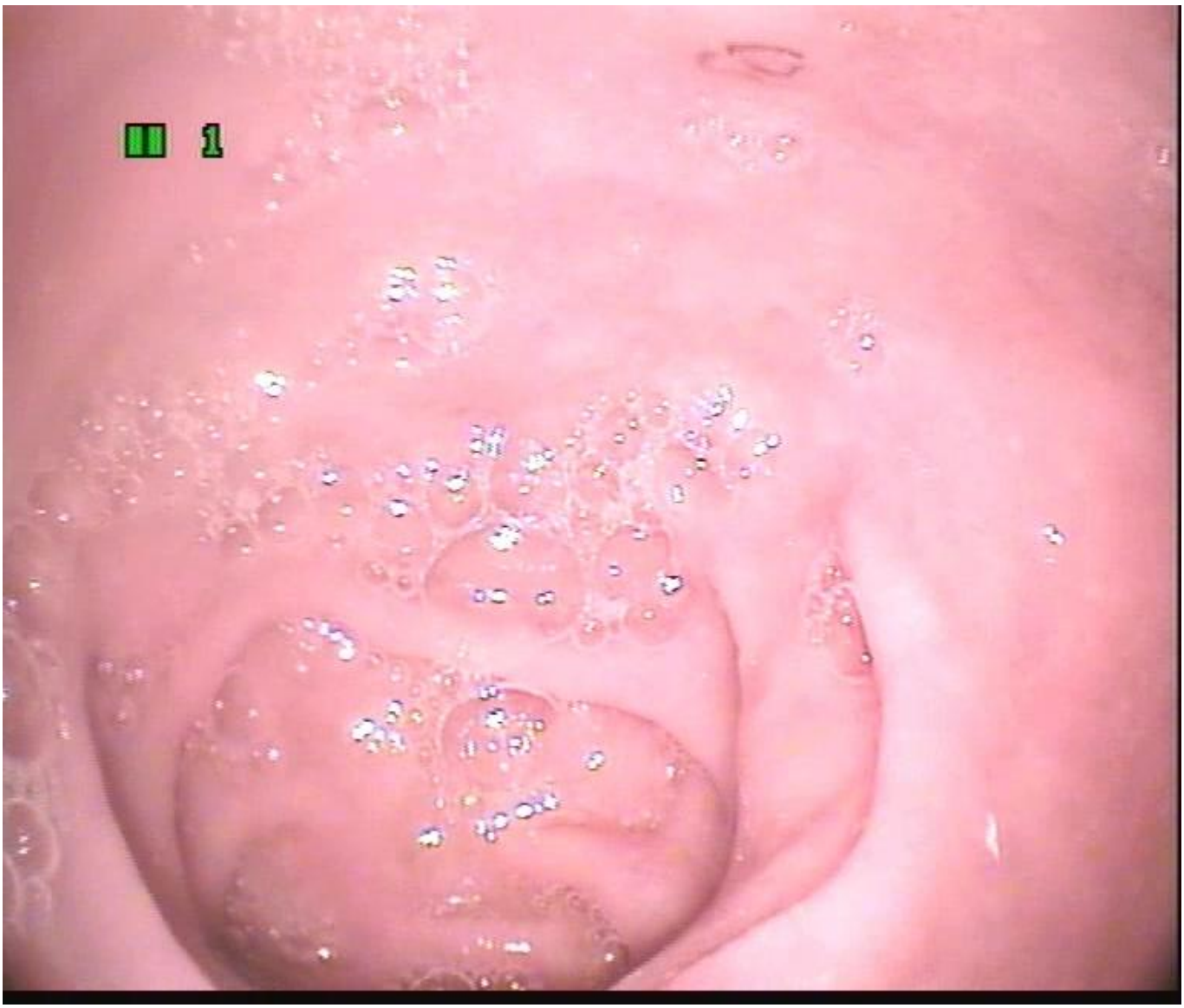

Fig 3: Multiple hookworms in duodenum in a patient with severe anaemia [haemoglobin 3.2 g%].

CONCLUSION:

1. Hence majority of the patients with hookworms in duodenum were in the early stage of hookworm infection in our study since11outof 14patientswithhookworms in duodenum had absence of anaemia and only mild anaemia.

2. Hence only few patients with hookworms in duodenum were in the late stage of hookworm infection in our study since only3outof 14patientswithhookworms in duodenum had moderate anaemia and severe anaemia.

ACKNOWLEDGEMENT:

The author acknowledges the immense help received from the scholars whose articles are cited and included in references of this manuscript. The author is also grateful to authors / editors / publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed. The author is extremely grateful to IJCRR editorial board members and IJCRR team of reviewers who have helped to bring quality to this manuscript.

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