

A Study of Colonic Transit Time in Patients With Chronic Idiopathic Constipation

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ABSTRACT

Background: To determine the colon transit time (CTT) in patients complaining of functional constipation and to evaluate the correlation between abnormal transit times and the types of constipation and the correlation with age and sex.

Materials and Methods: The signs and symptoms of 84 patients with infrequent or difficult defecation, 33 males and 51 females, with a median age of 33.7 were recorded by means of a questionnaire. After ingestion of radioopaque material, 20 markers per day for 3 days, abdominal X-rays were taken on days 4 and 7. If more than 5 markers remained in the segment of colon, another X-ray was taken in day 10. The numbers of markers in the X-ray and per segment (right and left hemi-colon and rectosigmoid colon) were counted; the CTT in hours was calculated by multiplying this number by 1.2.

Results: The total CTT was normal in 61 patients (72.6%) and prolonged in 23 (27.4%) ones. The CTT was prolonged in the rectosigmoid colon in 8 patients with an average total CTT of 81.3 ± 21.52 h, in 8 patients in the left colon with an average total CTT of 98.5 ± 40.083 h and in 7 patients in the right colon with an average total CTT of 19.94 ± 19.35 h. Of the patients with a normal total CTT, 41 (67.2%) ones had Rome III criteria for IBS. No statistically significant correlation could be demonstrated between CTT and age or sex.

Conclusion: Functional constipation may be associated with a normal CTT. Disorders of colonic motility and rectal evacuation could be distinguished by measuring the total and segmental colonic transit times.

Keywords: Radio-opaque marker, Colonic transit time (CTT), Idiopathic constipation.

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INTRODUCTION

Constipation is a subjective symptom of various presentations including incomplete, prolonged, difficult, rare or painful defecation, abdominal pain and bloating. It is also the manifestation of a subtype of irritable bowel syndrome (IBS) called constipation-predominant IBS (C-IBS), and it can be the major symptom of functional constipation.