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## **Scintigraphic assessment of retrograde colonic washout in fecal incontinence and constipation.**

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**PURPOSE:** This study aimed to evaluate the colorectal luminal transport obtained by retrograde colonic washout with a new scintigraphic technique. **METHODS:** Nineteen patients (5 with spinal cord lesion, 6 with idiopathic fecal incontinence, and 8 with idiopathic constipation) treated with retrograde colonic washout took indium-111-labeled polystyrene pellets to label the bowel contents. Technetium-99m-diethylene-triamine-pentaacetic acid was mixed with the irrigation fluid to assess its extent within the colorectum. Scintigraphy was performed before and after a standardized washout procedure. The colorectum was divided into four segments: the cecum and ascending colon, the transverse colon, the descending colon, and the rectosigmoid. Assuming ordered evacuation of the colorectum, the contribution of each colonic segment to the total evacuation was expressed in percent of the original segmental counts. The contributions of each segment were summed to reach a total defecation score (range, 0-400), and directional segmental transports were estimated. **RESULTS:** The defecation score in patients with idiopathic constipation (median, 59; range, 21-130) differed significantly ( $P < 0.05$ ) from the scores in those with spinal cord lesions (median, 204; range, 108-323) and idiopathic fecal incontinence (median, 188; range, 155-234). Thus, patients with spinal cord lesion or idiopathic fecal incontinence were able to empty most of the rectosigmoid and most of the descending colon, but those with idiopathic constipation could only empty 59 percent of the rectosigmoid. The irrigation fluid on average reached a point just beyond the right colic flexure that correlated with the defecation score ( $r(2) = 0.58$ ,  $P < 0.001$ ). **CONCLUSION:** The effect of retrograde colonic washout was significantly better in spinal cord lesion and idiopathic fecal incontinence than in idiopathic constipation, and its effect correlated with the extent to which the irrigation fluid had entered the colorectum.

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