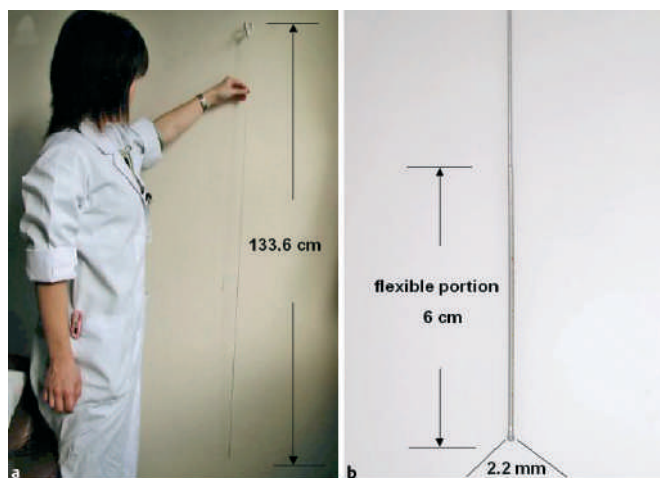


One of the main causes of difficulty when advancing a colonoscope is recurrent loop formation in the sigmoid colon. Techniques that have been developed to prevent this include the use of abdominal pressure, changing the patient's position, and the employment of a sliding tube [1]. These methods, however, have some disadvantages, such as the possibility of vagal reflexes, patient discomfort, mucosal injury, and discharge of liquid stool. To circumvent these potential problems, we have devised a new instrument, the “styler”. Here we report the usefulness of the styler in colonoscopy.

The styler used in our study is made of stainless steel. It has a diameter of 2.2 mm and is 133.6 cm in length overall, with a 6-cm flexible section at the tip to protect the forceps channel (Figure [1]). In order to assess the styler in colonoscopy, we studied a total of 200 consecutive patients who were undergoing colonoscopy, randomly dividing them into two groups of 100 patients. There were no significant differences between the two groups with respect to either gender or age at the time of enrollment and none of the patients had a history of abdominal surgery. In group A, when the tip of the colonoscope reached the splenic flexure of the colon, the sigmoidal loop was straightened and the styler was inserted through the forceps channel. The insertion of the styler stiffened the scope and allowed it to advance toward the transverse colon by keeping the sigmoid colon straight. The styler was then withdrawn and the colonoscopic examination was continued as the scope advanced toward the cecum. In group B, the colonoscopy was performed in the usual manner, without using the styler. In both groups, if recurrent loop formation occurred during the examination, abdominal pressure was applied and/or the patient's position was changed. We recorded the frequency of these maneuvers in the two groups.



**Figure 1** The “styler” is made of stainless steel and is 133.6 cm in length (a). It is 2.2 mm in diameter, and at the tip there is a 6-cm flexible section, which protects the forceps channel (b).

There were only two patients in group A who required abdominal pressure and no patients in this group required changes in position. In contrast, in group B, 36 patients required abdominal pressure and 22 patients required changes in position; 18 patients required both abdominal pressure and changes in position. The differences between the two groups with regard to the requirement for abdominal pressure, the requirement for change in position, and the requirement for both maneuvers were all statistically significant ( $P < 0.05$ , Mann-Whitney  $U$  test). Insertion of the styler did not cause any damage to the endoscopes. We experienced no difficulties in inserting the styler and no complications occurred during the study.

This study showed that the frequency of application of abdominal pressure and of the need to change the patient's position during colonoscopy may be considerably reduced by the use of this styler. Furthermore, total colonoscopy can be performed more safely, more quickly, and more cleanly than can be achieved with the use of a sliding tube.

**Competing interests:** None

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