

Gastric Lumen Observation Method with Ultrasonogram Using the Semisolid Water in the Gastrostomy Catheter Replacement

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Abstract

Purpose: In patients who had undergone percutaneous endoscopic gastrostomy (PEG), PEG catheter needs to be replaced periodically because of degradation over time, and confirmation of intragastric placement after the replacement is mandatory. Currently, catheter placement is generally confirmed endoscopically under radiographic illumination, but the burden on the patient is heavy. In this study, we examined the usefulness to observe catheter placement in the stomach by performing ultrasonography after PEG catheter replacement, with the aim of reducing the patient burden. **Subjects and Methods:** Fifty patients (12 men and 38 women) with a mean age of 82.1 ± 10.9 years who underwent replacement of a bumper-type PEG catheter were included in this study. Semisolid water (water jelly) was injected in the stomach to create good echo domain to make visible, and the catheter was replaced in the routine manner. The clarity of the ultrasonographic images obtained before catheter replacement, after injection of the semisolid water, and after the replacement was evaluated by using a 5-point scale (0 to 4).

Results and Discussion: The scores obtained before replacement, after injection, and after replacement based on the ultrasonographic images were 1.5 ± 0.7 , 3.2 ± 0.8 , and 2.6 ± 0.9 , respectively. Injection of semisolid water in the stomach was effective in confirming the catheter placement because it provided a better image of the PEG catheter.

Conclusion: The use of ultrasonography for confirmation of PEG catheter placement in the stomach was less invasive and reduced patient burden. Moreover, because its application is not limited to the site of the PEG catheter replacement, it may be an effective method.

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