

Title:

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Efficacy of daily abdominal self-massage for the prevention of recurrent common bile duct stones after endoscopic biliary sphincterotomy

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Dear Editor,

Recurrent common bile duct stones (CBDS) can occur after endoscopic biliary sphincterotomy (EST) (1). Bile flow through the papilla of Vater could be improved by means of abdominal massage (2). We report the results of self-abdominal massage in four patients who had previously undergone cholecystectomy and experienced multiple CBDS recurrences after EST. Patients massaged their right hypochondrium daily for 10 minutes.

Patient 1 suffered from nine recurrent CBDS episodes during 10 years after EST. The patient began abdominal self-massage in 1996. He had only one CBDS recurrence until his death in 2005, due to a biliary-unrelated cause. He underwent cholescintigraphy to evaluate the influence of massage on bile excretion. As shown in figures 1 and 2, bile flow into the duodenum was increased by self-massage.

Patient 2 experienced 22 CBDS recurrences during 11 years after EST. Abdominal self-massage was started in 2000. No further recurrence was observed. The patient was lost to follow-up in 2011.

Patient 3 had 9 CBDS recurrences during 14 years after EST. Abdominal self-massage was started in 2013. Since then, no further CBDS recurrences have been observed. The patient is currently in follow-up.

Patient 4 had a body mass index of 29.9 (obese). Abdominal self-massage was not effective.

Therefore, we report three patients in whom abdominal self-massage was effective to prevent recurrent CBDS. Obviously, further research is needed to confirm our findings. Delayed bile excretion has been presumed to cause recurrent CBDS (3). Therefore, bile cholescintigraphy could be useful to study the influence of self-massage in preventing CBDS recurrence.

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Consent for publication: the patients signed an informed consent for the publication of this case report.

Competing interests: the authors declare that they have no competing interests.

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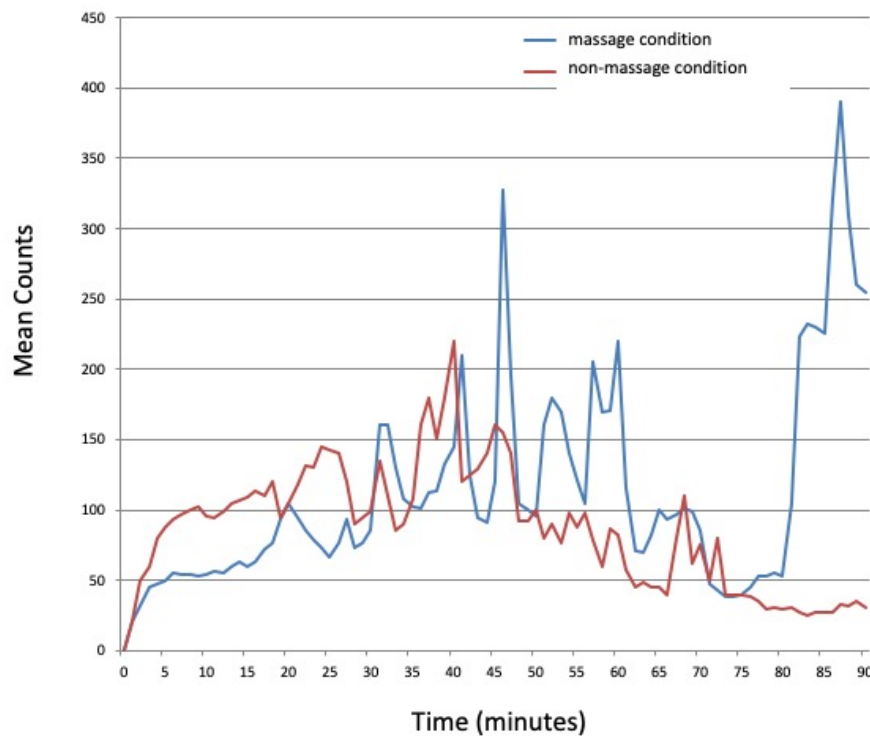


Fig. 1. Results of cholescintigraphy: time versus radioactivity curve under non-massage and massage conditions. The region of interest was plotted in the duodenum close to the papilla of Vater. The red line illustrates the radioactivity curve under non-massage conditions, and the blue line shows the radioactivity curve under massage conditions. The flow of bile into the duodenum is increased by abdominal massage, as indicated by the large spikes seen on the pitch curve.

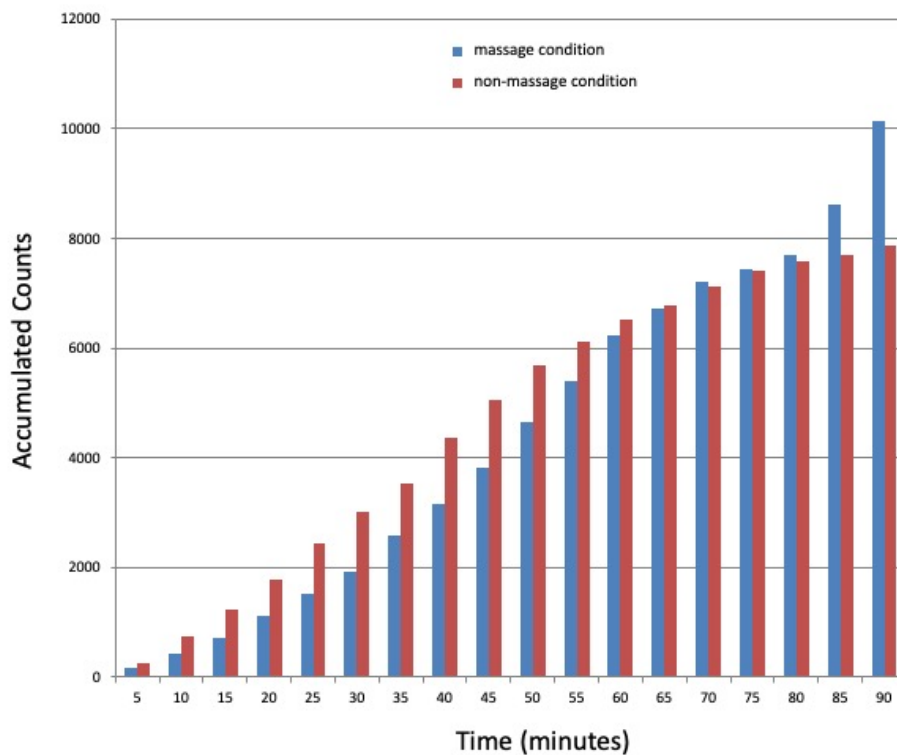


Fig. 2. Cumulative counts of 99m Tc-pyridoxyl-5-methyl-tryptophan every 5 min for 90 min in the duodenum. The bar graph shows cumulative counts of 99m Tc-pyridoxyl-5-methyl-tryptophan (99m Tc-PMT) every 5 min for 90 min in the duodenum close to the papilla of Vater under non-massaging and massaging conditions. The red bars relate to cumulative counts in non-massaging conditions, while the blue bars show cumulative counts under massaging conditions. The cumulative counts of 99m Tc-PMT under massaging conditions are higher than those under non-massaging conditions.