

Sphincter of Oddi Manometry: Methodological Issues in Reproducibility of Measurements

TO THE EDITOR: I was interested to read the paper by Suarez AL and colleagues published in the Mar 2016 issue of *Journal of Neurogastroenterology and Motility*. They aimed to evaluate the reproducibility of sphincter of Oddi manometry.¹ The authors used 214 subjects with post-cholecystectomy pain who were randomized into 3 arms, irrespective of manometric findings: sham (no sphincterotomy), biliary sphincterotomy, and dual (biliary and pancreatic). Thirty-eight subjects had both biliary and pancreatic manometries performed twice, at baseline and at repeat endoscopic retrograde cholangiopancreatography (ERCP) after 1-11 months. The sham arm was examined to assess the reproducibility of manometry.¹ They reported that biliary and pancreatic measurements were reproduced in 7/14 (50%) untreated subjects. All 12 patients with initially elevated biliary pressures in biliary and dual sphincterotomy groups normalized after biliary sphincterotomy. However, 2 of 8 subjects with elevated pancreatic pressures in the dual sphincterotomy group remained abnormal after pancreatic sphincterotomy. Paradoxically, normal biliary pressures became abnormal in 1 of 15 subjects after biliary sphincterotomy, and normal pancreatic pressures became abnormal in 5 of 15 patients after biliary sphincterotomy, and in 1 of 9 after pancreatic sphincterotomy.¹ First of all, it is crucial to know that descriptive statistics cannot provide a simple substitute for clinical judgment in reliability analysis.²⁻⁵ Moreover, to assess the reproducibility, depending on the quantitative or qualitative type of our data, exact intra class correlation coefficient or weighted kappa can be used.²⁻⁵ As the authors pointed out in their conclusion, SOM measurements are poorly reproducible, and question

our ability to perform pancreatic sphincterotomy adequately. Such a conclusion can be a misleading message due to inappropriate use of statistical tests to assess reproducibility. As a take home message, for reproducibility analysis, appropriate tests should be used with careful interpretation.

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Conflicts of interest: None.