Use of intraperitoneal prophylactic drain after distal pancreatectomy: results from an Italian survey

Nicolò Pecorelli[1,2,11], Claudio Ricci[3,4,11], Alessandro Esposito[5,11], Giovanni Capretti[6-7,11], Stefano Partelli[1.2,11^], Giovanni Butturini[8,11] , Ugo Boggi[9,11], Alessandro Cucchetti[4,10], Alessandro Zerbi[6-7,11], Roberto Salvia[5,11], Massimo Falconi[1,2,11]

[1] Division of Pancreatic Surgery, San Raffaele Scientific Institute; Milan, Italy. [2] "Vita-Salute" San Raffaele University, Milan, Italy. [3]Division of Pancreatic Surgery, IRCCS Azienda Ospedaliero-Universitaria Di Bologna. [4]Department of Internal Medicine and Surgery (DIMEC); Alma Mater Studiorum, University of Bologna. [5] General and Pancreatic Surgery Department, The Pancreas Institute-University of Verona Hospital Trust, Verona, Italy. [6] Pancreatic Surgery Unit, Humanitas Clinical and Research Center-IRCCS, Via Manzoni 56, Rozzano, Milan, Italy. [7] Department of Biomedical Sciences, Humanitas University, Via Rita Levi Montalcini 4, Pieve Emanuele, Milan, Italy. [8] Surgical Department, HPB Unit Pederzoli Hospital, Peschiera Del Garda, Italy. [9] Division of General and Transplant Surgery, University of Pisa, Italy. [10] Morgagni e Pierantoni Hospital, Forlì, Italy. [11] Surgical Taskforce of Italian Association for the Study of the Pancreas

Background: The use of Intraperitoneal prophylactic drain (IPD) in distal pancreatectomy (DP) remains controversial.

Methods: In June 2022, an online survey was sent to the Italian community of pancreatic surgeons through institutional emails, Twitter, and Facebook accounts of the Italian Association for the Study of the Pancreas (AISP) and the Italian Association of Hepato-biliary-pancreatic Surgery (AICEP). The survey was designed to investigate surgeons use of IPD in DP patients through 23 questions and one clinical vignette. For the clinical scenario, respondents were asked to report their regret of omission and commission regarding the use of IPD elicited on a scale between 0 (no regret) and 100 (maximum regret). The threshold model and a multilevel mixed model regression were applied to analyze respondents' attitudes.

Results: One hundred six surgeons from 55 different Italian centers completed the survey. The median age of respondents was 46 years (36 to 57). Ninety-four (89%) respondents were attending surgeons, while 12 (11%) were HPB fellows. Seventy-four (70%) surgeons worked in an academic center. One hundred five (99%) respondents confirmed using at least one IPD. Most surgeons (81%) prefer placing a single passive drain. All surgeons performing minimally invasive DP declared not changing their policy based on the surgical approach (open vs. MIS). **Figure 2** one shows the timing of drain removal Only 35 (33%) surgeons remove the IPD within postoperative day 3. Ten respondents (9%) declared a change in IPD strategy in patients at low risk of clinically relevant postoperative pancreatic fistula (CR-POPF), and thirteen (12%) respondents changed their strategy in high-risk POPF situations. The choice in number and type of drain, and the use of a selective drain management strategy was mostly related to surgeon experience and institutional volume of pancreatic surgery performed.

The median regret due to the omission of IPD, which proved to be the wrong decision, was 80 (50 to 100, IQR). The median regret due to the commission of IPD, which turned out to be useless, was 2.5 (1 to 20, IQR). The CR -POPF probability threshold at which drainage omission was the less regrettable choice was 7% (1 to 50, IQR).

Conclusion: Drain management policies after DP remain very heterogeneous among surgeons. The regret model suggested that IPD omission could be performed in low-risk patients, leading to low regret in the case of the wrong decision, making it an acceptable clinical decision.

Figure 1. Geographical distribution of survey respondents

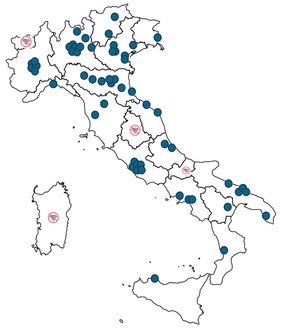


Figure 2. Timing of drain removal if no evidence of pancreatic fistula

