



## BP OP 2-6

### The triple-checked criteria for drain management after pancreatectomy

Daisuke HASHIMOTO, Sohei SATOI\*, Tomohisa YAMAMOTO, So YAMAKI, Satoshi HIROOKA, Tatsuma SAKAGUCHI, Mitsugu SEKIMOTO

*Department of Surgery, Kansai Medical University, Japan*

**Introduction :** Management of drains is important for the detection and treatment of clinically relevant postoperative pancreatic fistula (CR-POPF) after pancreatectomy. In 2016, we established the triple-checked criteria to remove drains after pancreatectomy: drain fluid amylase (DFA) <5,000 U/l on POD 1 and DFA <3,000 U/l on POD 3, or CRP <15 mg/dl on POD 3. The aim of this retrospective study was to validate the efficacy and safety of the triple-checked criteria.

**Methods :** Six hundred eighty-one patients who underwent pancreatectomy from 2012 to 2019 were included. Drains were removed following our previous criteria (sequentially-checked criteria: DFA <5,000 U/l on POD 1 and DFA <3,000 U/l on POD 3) from 2012 to 2016 (control group), and following the triple-checked criteria from 2017 to 2019 (intervention group).

**Results :** The control group included 406 patients (256 PD, 142 DP and 8 others), and the intervention group included 275 patients (177 PD, 93 DP and 5 others) ( $p=0.938$ ). Pancreatic texture was soft in 68.2% patients in the control group and 62.5% patients in the intervention group ( $p=0.125$ ). In the control group, 76.1% patients met the sequentially-checked criteria. On the other hand, significantly more patients (83.6%) met the triple-checked criteria in the intervention group ( $p=0.018$ ). There was no significant difference in the incidence of CR-POPF (11.1% vs 14.2%,  $p=0.228$ ). False positive rate of the criteria was significantly lower in the intervention group (31.1%) than in the control group (64.9%,  $P<0.001$ ).

**Conclusions :** Triple-checked criteria contributed to safe drain removal after pancreatectomy without increasing CR-POPF.

Corresponding Author. : **Sohei SATOI** ( [satoi@hirakata.kmu.ac.jp](mailto:satoi@hirakata.kmu.ac.jp) )

Presenter : **Daisuke HASHIMOTO** ( [daisukeh007@gmail.com](mailto:daisukeh007@gmail.com) )