THE COLLEGE OF SURGEONS OF HONG KONG

REPORT ON RESEARCH PROJECT

RR9434

★*No HANDWRITTEN research report submission will be accepted.*
★ *Please fill in ALL the blanks in Block Letters. Missing any items may lead to failure of processing your research report.*

SECTION A : PERSONAL PARTICULARS OF HST TRAINEE

Name of Trainee: Tam Tai Huen, Prudence **~~BST~~ / HST *** **Specialty:** General Surgery
Commencing date of ~~BST~~ / HST* Training: 1/7/2017 **Principal Hospital:** PWH
Current Training Period : 1/7/2019 **to** 31/12/2019 **Training Hospital:** PWH

** Please delete as appropriate.*

SECTION B : RESEARCH PROJECT

Title: EUS-guided Gallbladder Drainage Versus Laparoscopic Cholecystectomy for Acute Cholecystitis. A Propensity Score Analysis.

Principal investigator: Prudence Tai-Huen Tam
Co-investigators:
Teoh AY, Au Yeung KK, Chan DL, Leung CH, Mok RC, Ng SK, Chan SC, Yip HC, Chiu PY, Ng EK
Duration of project: 11-12/2019
Current Status: ☐ Ongoing √ Completed
Type of Research: ☐ Case Report* ☐ Literature Review* √ Clinical Study ☐ Laboratory Study*
☐ **Others (Please Specify)**

Role of trainee (%):

Conceptualization & design	70%
Conduct of Study	80%
Data collection	100%
Data analysis	80%
Abstract / Manuscript writing up	70%

Have you ever submitted this research project (Ongoing) with the same title before? ☐ Yes √ No

** A trainee may submit ONE case report, literature review or meta-analysis report ONLY. They should reach the standard for publication in a peer-review journal. The Higher Trainees MUST be the first Author and is required to submit the proof of acceptance or publication.*

Abstract (The content should include Background, Aim of study, Method, Result and Conclusion.)

You are NOT required to include the result and conclusion in the abstract if your project is still **ongoing.*

**A key reference list should be included in your research report. The total number of references should not be more than 5.*

Background

EUS-guided gallbladder (EUS-GBD) is an effective and safe alternative to percutaneous drainage (PT-GBD) for acute cholecystitis. The procedure has been shown by meta-analysis to be associated with lower rates of post-procedure adverse events, shorter hospital stays, and fewer reinterventions and readmissions. However, how the procedure compares to laparoscopic cholecystectomy is unknown. The aim of the current study is to compare the long-term outcomes of EGBD with laparoscopic cholecystectomy (LC) for acute cholecystitis using propensity score matching.

Method

This was a retrospective study of all patients admitted for acute cholecystitis between 2012 to 2018 in the Prince of Wales Hospital in Hong Kong. Consecutive patients that received EUS-GBD or LC were included. Since patients that were included for EUS-GBD were at very-high risk for cholecystectomy, to make the two groups more comparable, they were matched for age, sex and age-adjusted charlson score using propensity score matching. Outcome measurements included 30-day adverse events, mortality, recurrent cholecystitis, recurrent biliary events, reinterventions and readmissions.

Results

During the study period, a total of 144 patients were identified and after propensity score matching, 62 patients were selected (31 EUS-GBD vs 31 LC). There were no statistically significant differences in the background demographics. The technical success rates (100% vs 100%, P = 1), clinical success rates (90.3% vs 100%, P = 0.238) and mean (S.D.) lengths of hospital stays [6.6 (8.0) vs 5.9 (3.5), P = 0.169] were similar between the groups. The 30-day adverse events [5 (16.1%) vs 5 (16.1%), P = 1] and mortality rates [3 (9.7%) vs 0 (0%), P = 0.238] were similar. None of the patients in the LC group required conversion to open surgery. The rates of recurrent biliary events [4 (12.9%) vs 3 (9.7%), P = 1], re-interventions [5 (16.1%) vs 3 (9.7%), P = 0.707] and unplanned readmissions [4 (12.9%) vs 3 (9.7%), P = 1] were also similar. Most of the patients with recurrent biliary events were due to common bile duct stones that required ERCP. One patient in the EUS-GBD group had recurrent acute cholecystitis. The duration of follow-up was significantly longer in the EUS-GBD group [561.9 (470.3) vs 278.5 (364.5), P = 0.003].

Conclusion

The outcomes of EUS-GBD for acute cholecystitis were comparable to LC in the longer term with acceptable rates of recurrent acute cholecystitis. This suggests that the procedure can be an alternative to LC in a selected group of surgically fit patients.

Key reference list:

1. Endoscopic ultrasound-guided gallbladder drainage versus percutaneous cholecystostomy for high risk surgical patients with acute cholecystitis: a systematic review and meta-analysis. Sally Wai-Yin Luk, Shayan Irani, Rajesh Krishnamoorthi, James Yun Wong Lau, Enders Kwok Wai Ng, Anthony Yuen-Bum Teoh. Endoscopy 2019; 51(08): 722-732.

SECTION C : COMMENTS FROM TRAINEE / SUPERVISOR

(Attach separate document if necessary)

Declaration: I declare that this research project is not, or has not been, submitted by another trainee

Name of Trainee: TAN TAI HUAN PRADEEP **Signature:** **Date:** 15/3/2020

Name of Supervisor: TEOH YUEN RUN ANTHONY **Signature:** **Date:** 16/3/2020

Revised on May 2018

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23 MAR 2020
BY:.....