中文題目:總膽管結石經內視鏡逆行性膽胰管攝影術術後產生肝膿瘍的風險

英文題目: The influential factors for developing liver abscess after Endoscopic Retrograde

Cholangiopancreaticography with Choledocholithiasis

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## Background:

Pyogenic liver abscesses (PLA) are the most common type of human visceral abscess. The mechanism may be due to either the leakage of bowel contents or microbes which subsequently spread to the liver via the portal circulation or in the setting of a biliary infection. Endoscopic retrograde cholangiopancreaticography (ERCP) creates a communication of bowel contents to both the biliary system and liver, which implies the risk of PLA after the procedure. Up until now, there has been a lack of data regarding the issue. Therefore, we conducted a population based, cohort study to analyze the risk of PLA among patients receiving ERCP with choledocholithiasis.

## Method:

This study was based on data from the Chung Gung Research Database (CGRD) between January 1, 2001 and December 31, 2018. Those who had an International Classification of Diseases, Ninth and Tenth Revision (ICD9 and ICD10) codes of choledocholithiasis and received ERCP were enrolled. After strict exclusions, 11697 patients were further divided into the endoscopic sphincterotomy (ES) group (n=7111) and other ERCP group (n=4586) for analysis.

## Results:

Baseline data showed ES group is elder, more comorbidities including diabetes, lipid disorders, hypertensive heart disease, and higher percentage of the use of NSAID/COX-2 inhibitors, aspirin, clopidogrel, beta blocking agents and calcium channel blockers and statin. During the following period for 17 years, the ES group has slightly higher probabilities of liver abscess than other ERCP group (2.01% versus 1.68%, p=0.1970). On multivariate analysis, the procedure of ES(adjusted hazard ratio (aHR): 1.49; 95% CI, 1.12-1.98; p=0.0058), age(aHR: 1.02; 95% CI, 1.00-1.03; p=0.0048), ERBD (aHR: 1.66; 95% CI, 1.08 - 2.54; p= 0.0196), surgery for choledocholithiasis (aHR: 1.60; 95% CI, 1.13 - 2.28; p= 0.0080), and hepatobiliary malignancy (aHR: 2.91; 95% CI, 2.07 - 4.08; p < 0.0001) were the independent risk factors for developing liver abscess. However, ES was a protective factor for further acute pancreatitis (HR: 0.72; 95% CI, 0.60-0.85; p=0.0002) and cholangitis (HR: 0.91; 95% CI, 0.84-0.99; p=0.0259) compared with other ERCP group.

## **Conclusions:**

The procedure of ES during ERCP for CBD stone removal is a risk factor for liver abscess in the long term following up, but reduces the risk of further acute pancreatitis and cholangitis.