

## Change of Endocrine and Exocrine Insufficiency on Non-Diabetes Patients after Distal Pancreatectomy: A Nationwide Database Study

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**Abstract :** Background: The aim of this population-based study was to determine the occurrence of diabetes and exocrine pancreatic insufficiencies (EPI) on non-diabetes subjects receiving distal pancreatectomy (DP). Method: A nationwide cohort study between 2000 and 2010 was collected from the Taiwan National Health Insurance Research Database. Among 3264 DP patients, we identified 1410 non-diabetes and 966 non-diabetes non-EPI. Results. Of 1410 non-diabetes DP subjects, 312 patients (22.1%) developed newly-diagnosed diabetes after PD. On a multiple logistic regression model, co-morbid hyperlipidemia (odds ratio, 1.640; 95% CI, 1.362–2.763;  $P < 0.001$ ) and pancreatitis (odds ratio, 2.428; 95% CI, 1.889–3.121;  $P < 0.001$ ) significantly contributed to higher incidences of diabetes after DP. Moreover, 380 subjects (39.3%) developed EPI, and pancreatic cancer is the statistically significant risk factor (odds ratio, 4.663; 95% CI, 2.108–6.085;  $P < 0.001$ ). Conclusion: The patients with co-morbid hyperlipidemia and chronic pancreatitis had higher rates of newly-diagnosed diabetes after DP, moreover, pancreatic cancer subjects had higher rates of pancreatic exocrine insufficiency after DP. The clinicians should be alert to follow up glucose metabolism and clinical symptoms of fat intolerance for DP patients.

**Keywords :** distal pancreatectomy, National database, diabetes, exocrine insufficiency

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