

中文題目：慢性阻塞性肺病病人接受膝關節置換術後的預後

英文題目：Outcomes after Total Knee Replacement in Patients with Chronic Obstructive Pulmonary Disease

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**Background:** The incidence and prevalence of chronic obstructive pulmonary disease (COPD) is associated with increasing age. Osteoarthritis is also a growing problem in the aging population, and total knee replacement (TKR) is a common surgical procedure for this population. An increasing number of COPD patients are receiving TKR, but few studies have examined the complications and outcomes after TKR in COPD patients. The purpose of this study was to investigate the complications in COPD patients after receiving TKR.

**Material and methods:** The National Health Insurance operated by the government is a nationwide health care program with universal coverage in Taiwan. It covers approximately 99% of the total Taiwanese population of 23 million people. In this study, we analyzed the longitudinally-linked National Health Insurance Research Database, which consists of a cohort of 1,000,000 randomly selected enrollees retrospectively followed from 1996 to 2010. This study analyzed patients who underwent TKR surgery between January 1, 2004 and December 31, 2009 by identifying the ICD-9-CM code. We separated patients into COPD and non-COPD groups. Five study outcomes and complications were measured after TKR, including mortality for 1 and 3 years, wound infections for 1 and 2 years, hospitalization readmission for 30 and 90 days, pneumonia for 30 and 90 days, and cerebrovascular accidents (CVAs).

**Results:** A total of 3,431 patients who underwent TKR surgery were identified, including 358 patients with COPD and 3,073 patients without COPD. The COPD group had a higher percentage of 90-day pneumonia (3.7% vs. 1.1%), 30-day readmission (7.0% vs. 4.0%), 30-day CVA (1.7% vs. 0.6%), 90-day CVA (3.9% vs. 2.1%) and 3-year mortality (3.9% vs. 2.1%) than the non-COPD group. COPD was associated with 90-day pneumonia [adjusted hazard ratio (HR) = 2.12, P-value = 0.030] after adjusting for sex, cardiovascular disease and CVA occurrence.

**Conclusions:** Patients with COPD had a higher risk of pneumonia after TKR than patients without COPD, but no significant differences were found for CVAs and mortality.