

中文題目：SGLT2 抑制劑與 GLP-1 受體激動劑降低新發生心房震顫的保護效應
英文題目：The protective effects of SGLT2 inhibitors and GLP-1 receptor agonists to reduce the risk of new-onset atrial fibrillation

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Background:

The benefits of novel anti-diabetic medications sodium-glucose cotransporter-2 (SGLT2) inhibitors in patients with heart failure (HF), and of glucagon-like peptide-1 (GLP-1) receptor agonists in atherosclerotic disease had been validated in clinical trials, however, its protective effect of new-onset arrhythmias was uncertain. Our aim was to assess the association of SGLT2 inhibitors and GLP-1 agonists with new onset atrial fibrillation (Af) in patient with diabetes mellitus (DM).

Method:

We have retrospectively collected patients with unsatisfactory control of DM (HbA1c>7.0%) after the date of the first SGLT2 inhibitor introduction, and without previous diagnosis of Af from our electrical health record cardiovascular databank. We classified patients with new prescription of SGLT2 inhibitors or GLP-1 receptor agonist as targeted groups, and the remainders as control group. The new onset Af was diagnosed by 12-lead or Holter's 24-hour continuous electrocardiography. Propensity score matched (PPM) analysis was conducted to balance underlying disease confounders. We then compared their primary outcome in terms of new-onset Af, and other outcomes including all-cause mortality, cardiovascular death and HF hospitalization.

Results:

We have enrolled total 4,248 patients and after PPM conducted were further classified into dapagliflozin (n=377), empagliflozin (n=377), GLP-1 (n=108), and control groups (n=372) with mean follow up days from 392.2 to 514.9 days. Compared with the control group, SGLT2 inhibitors showed significantly lower risk of new-onset Af in both dapagliflozin (HR 0.263, 95%CI: 0.070-0.991) and empagliflozin groups (HR: 0.161, 95%CI: 0.034-0.758) groups, but not in GLP-1 group (HR: 0.321, 95%CI: 0.040-2.568).

Conclusion:

The use of SGLT2 inhibitors, both dapagliflozin and empagliflozin, in patients with diabetes mellitus were associated with significantly lower risk of new-onset atrial fibrillation, but not significantly presented in GLP-1 receptor agonist group.

Time - New development of atrial fibrillation Curve

