

Cardiovascular disease

Comparing compliance with new anticoagulants in AF patients

Patients with atrial fibrillation (AF) treated with once daily rivaroxaban had significantly better adherence and fewer gaps in treatment compared with those on twice daily apixaban, an observational study has found.

Data were obtained on patients with non valvular AF aged 18 or over who were treated with rivaroxaban or apixaban between June 2012 and April 2014. Overall 11,477 patients treated with rivaroxaban and 2,992 with apixaban were identified. Baseline demographic and clinical features were well matched for the two groups. Adherence to therapy was measured at 90 and 180 days. This was defined by the proportion of days covered (PDC) ≥ 0.80 and PDC ≥ 0.90 . Gaps in supply of medication were also evaluated.

Relative to patients who received apixaban, those treated with rivaroxaban were more likely to have a PDC ≥ 0.80 at both 90 days (85.3% vs 79.9%; $P < 0.001$) and 180 days (75.8% vs 72.2%; $P = 0.001$). Similar results were observed with PDC ≥ 0.90 .

The proportion of patients with at least one 5+ and 10+ day gap in prescriptions was significantly lower in the rivaroxaban compared with the apixaban group: 54.2% versus 62.4% ($P < 0.001$) and 40.0% versus 49.2% ($P < 0.001$), respectively.

The study aimed to compare adherence with rivaroxaban and apixaban in patients with non valvular AF in routine clinical practice. It did not address persistence with therapy.

Compliance or adherence can be defined as the extent to which a patient acts in accordance with the prescribed interval, and dose of a dosing regimen. Medication persistence is a different concept which refers to the act of continuing the treatment for the prescribed duration.

The authors concluded that patients on a once daily regimen with rivaroxaban had significantly higher adherence and fewer gaps in treatment compared with twice daily apixaban. However, this study did not explore whether or not these differences translated into differences in patient outcomes.

More research in this area is needed to inform the optimal dosing strategy for these drugs.

DR PETER SAVILL

McHorney CA, Peterson ED, Laliberte F et al. Comparison of adherence to rivaroxaban versus apixaban among patients with atrial fibrillation. *Clin Ther* 2016 Oct 24. pii: S0149-2918(16)30737-8. doi: 10.1016/j.clinthera.2016.09.014

Diabetes

Diabetes therapy does not raise risk of breast cancer

The use of GLP-1 analogues was not associated with an overall increased risk of breast cancer in a population based cohort study, in the *BMJ*.

Data were obtained from the UK Clinical Practice Research Datalink on 44,984 women, aged 40 or over, who were newly treated with glucose lowering drugs between the beginning of January 2007 and the end of March 2015. (2007 was the year that the first DPP-4 inhibitor and GLP-1 agonist were licensed in the UK.) The cohort was followed up until the end of March

2016. Patients were considered unexposed to a diabetes therapy until they had been taking it for a year.

Patients were required to have at least a year of medical history on the database before their first prescription of hypoglycaemic drugs. Patients being treated with insulin were excluded as this was suggestive of advanced disease. Women with gestational diabetes and polycystic ovaries were also excluded, to ensure that all metformin prescriptions were for established diabetes.

The cohort was followed for a mean of 3.5 years. There were 549 incident diagnoses of breast cancer recorded; crude incidence 3.5 (95% CI: 3.3-3.8) cases/1,000 person years.

Overall, compared with the use of DPP-4 inhibitors, use of GLP-1 analogues was not associated with an increased risk of breast cancer; incidence 4.4 v 3.4 per 1,000 person years; hazard ratio (HR) 1.4 (95% CI: 0.91-2.16).

HRs gradually rose with duration of GLP-1 analogue use, with a peak at 2-3 years; HR 2.66 (95% CI: 1.32-5.38) and returned closer to the null after more than three years' use HR 0.98 (95% CI: 0.24-4.23).

The study authors conclude: 'In this population based study, the use of GLP-1 analogues was not associated with an overall increased risk of breast cancer, providing some reassurance to patients and clinicians. While the observed duration-response associations might be compatible with a tumour promotor effect, they are likely a result of a transient increase in detection of breast cancers in GLP-1 analogue users.'

This study is consistent with the recently published LEADER trial, a prospective study of the GLP-1 analogue liraglutide.¹ This also showed a transient increase in breast cancer detection in early treatment and no overall excess mortality over longer follow-up. The main endpoint of the LEADER study was to show that cardiovascular outcomes were improved, and this was demonstrated.

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Hicks MB, Yin H, Yu OHY et al. Glucagon-like peptide-1 analogues and risk of breast cancer in women with type 2 diabetes: population based cohort study using the UK Clinical Practice Research Datalink. *BMJ* 2016;355:i5340

REFERENCE

1 Marso SP, Daniels GH, Brown-Frandsen K et al for the LEADER steering committee on behalf of the LEADER trial investigators. Liraglutide and cardiovascular outcomes in type 2 diabetes. *N Engl J Med* 2016;375:311-22