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**Titre**: Use of glucagon-like peptide-1 receptor agonists and bone fractures: a meta-analysis of randomized clinical trials.

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**Résumé en anglais**

**BACKGROUND**: Patients with type 2 diabetes mellitus (T2DM) are at a higher risk of bone fractures independent of the use of antidiabetic medications. Furthermore, antidiabetic medications could directly affect bone metabolism. Recently, the use of dipeptidyl peptidase-4 inhibitors has been associated with a lower rate of bone fracture. The aim of the present meta-analysis was to assess whether patients with T2DM treated with glucagon-like peptide-1 receptor agonists (GLP-1Ra) present a lower incidence of bone fracture compared with patients using other antidiabetic drugs.

**METHODS**: A search on Medline, Embase, and http://www.clinicaltrials.gov [8], as well as a manual search for randomized clinical trials of T2DM treated with either a GLP-1Ra or another antidiabetic drug for a duration of ≥24 weeks was conducted by two authors (GM, AM) independently.

**RESULTS**: Although 28 eligible studies were identified, only seven trials reported the occurrence of at least a bone fracture in one arm of the trial. The total number of fractures was 19 (13 and six with GLP-1Ra and comparator, respectively). The pooled Mantel-Haenszel odds ratio for GLP-1Ra was 0.75 (95% confidence interval 0.28-2.02, P = 0.569) in trials versus other antidiabetic agents.

**CONCLUSIONS**: Although preliminary, our study highlighted that the use of GLP-1Ra does not modify the risk of bone fracture in T2DM compared with the use of other antidiabetic medications.
Liens

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