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## Bromocriptine as a novel anti-diabetic drug – Systematic review

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In May 2009, FDA approved bromocriptine-QR, a central insulin sensitizer, as an anti-diabetic drug either as monotherapy or as an add-on therapy for type 2 diabetes. This systematic review is undertaken to assess the efficacy and safety of bromocriptine-QR in adults with type 2 diabetes mellitus based on randomized controlled trials published in peer-reviewed journals. We performed a comprehensive literature search of Google, Pubmed/Medline, Embase, Scopus and the Cochrane Library up to September 2015. Randomized controlled trials of bromocriptine-QR therapy in type 2 diabetes mellitus were eligible. Information was collected concerning basic study data, patient characteristics, methodological quality, efficacy and safety outcomes. There were seven randomized controlled trials on bromocriptine-QR as add-on therapy. All seven trials revealed a statistically significant ( $P < 0.05$ ) reduction in glycemic markers in bromocriptine group. Compared to placebo group bromocriptine-QR as add-on therapy lowered hemoglobin A1c with weighed mean difference  $-0.67$ , 95% CI  $-0.76$  to  $-0.45$ . Similarly FBS was reduced with weighed mean difference 18 mg/dl, 95% CI 14 mg/dl to 23 mg/dl and PPBS was reduced with weighed mean difference 28 mg/dl, 95% CI 24 mg/dl to 33 mg/dl. Safety data show that nausea, headache, vomiting, somnolence, and hypoesthesia commonly reported (7-11%) but, they are mild and transient. Moreover, bromocriptine-QR group had no increased risk of hypoglycaemia, hypotension and positive cardiovascular effects. In conclusion, bromocriptine-QR therapy offers an attractive alternative option to currently available oral anti-diabetic agents for type 2 diabetes mellitus because of novel mechanism of action, good side effect profile and its effects to reduce cardiovascular event rates.

### Biography

Allen Rodrigues has completed his MBBS from AJ Institute of Medical Sciences, Mangalore, India. Currently he is pursuing MD (Pharmacology) at Bengaluru Medical College & Research Institute, Bengaluru. His area of interest is diabetic pharmacology.

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