COST-EFFECTIVENESS OF SAXAGLIPTIN VERSUS ACARBOSE AS SECOND-LINE THERAPY IN TYPE 2 DIABETES IN CHINA
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Diabetes is a huge health problem with high and escalating disease burden. Efficacy and tolerability are no longer the only criteria to assess a drug; favorable adverse event profiles, convenient dosing frequency and ease of administration are also essential. Both acarbose (ACAR) and saxagliptin (SAXA) are recommended as second-line therapies for type 2 diabetes mellitus (T2DM) in China with proved efficacy. However, compared with SAXA, efficacy of ACAR may be impeded by its gastrointestinal adverse events, frequent dosing schedule and inconvenient administration, resulting in poor treatment adherence. This study aimed to assess long-term cost-effectiveness of SAXA versus ACAR as add-on therapy to metformin (MET) in Chinese patients with T2DM who are inadequately controlled on MET alone. Systematic literature reviews were performed to identify studies directly comparing SAXA+MET versus ACAR+MET, and to obtain diabetes-related events costs which was modified by hospital surveys. Cardiff Diabetes Model was used to estimate long-term economic and health treatment consequences in patients. Costs (2014 Chinese yuan) were calculated from the payer’s perspective and estimated over a patient’s lifetime. SAXA+MET predicted lower incidences of macrovascular and microvascular events, hypoglycemia events and fatal macrovascular events, and decreased total costs compared with ACAR+MET. For an individual patient, the quality-adjusted life-years (QALYs) gained with SAXA+MET was 0.06 more than ACAR+MET at an incremental cost saving of ¥149, which resulted in −¥2,536/QALY gained for SAXA+MET versus ACAR+MET. Results were robust across various univariate and probabilistic sensitivity analyses. SAXA+MET is a cost-effective treatment alternative compared with ACAR+MET for patients with T2DM in China, with greater effectiveness and lower costs. SAXA is an effective, well-tolerated drug with a low incidence of adverse events and ease of administration; it is anticipated to be an effective second-line therapy for T2DM treatment.