

Review Group Membership

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Technology review is a brief report, prepared on an urgent basis, which draws on restricted reviews from analysis of pertinent literature, on expert opinion and / or regulatory status where appropriate. It is subjected to an external review process. While effort has been made to do so, this document may not fully reflect all scientific research available. Additionally, other relevant scientific findings may have been reported since completion of this review.

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Introduction

Hypertension is estimated to cause 4.5% of the global disease burden and is as prevalent in many developing countries as in developed countries. Recently, it has become increasingly clear that the development of stroke, ischemic heart disease, and renal failure have been attributed by hypertension. According to National Health and Morbidity Survey (NHMS) III in 2006, hypertension prevalence in Malaysia was 32.2% for residents aged 18 years and above. There are many drugs used in combination to manage hypertension such as beta blocker, Angiotensin Receptor Blockers (ARBs), Angiotensin converting enzyme inhibitors (ACEs), calcium channel blockers (CCBs) and diuretics such as thiazide diuretics, thiazide-like diuretics, potassium sparing and loops diuretics. Diuretics play important roles in management of hypertension. Intriguing findings from Multiple Risk Factor Intervention Trial (MRFIT) suggested that thiazide-like diuretic which is Chlorthalidone might confer mortality benefits over hydrochlorothiazide (thiazide diuretic), but the findings have never been investigated in a prospective study. Most experts generally consider hydrochlorothiazide and Chlorthalidone interchangeable.

Objective/Aim

To assess the safety, efficacy / effectiveness and cost-effectiveness of Chlorthalidone to reduce cardiovascular events compared with current practice with hydrochlorothiazide.

Results and Conclusions

The studies available were of good level of evidence. However, there was limited study available that compared Chlorthalidone (CTDN) and Hydrochlorothiazide (HCTZ) head to head. Based on this technology review, Chlorthalidone demonstrated that it can reduce the risk of cardiovascular events (CVEs) compared with hydrochlorothiazide.

Methods

Electronic databases were searched through Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1948 to present, EBM Reviews - NHS Economic Evaluation Database 4th Quarter 2012, EBM Reviews - Cochrane Database of Systematic Reviews 2000 to December 2012 and EBM Reviews - Cochrane Central Register of Controlled Trials December 2012. Searches were also run in PubMed, Horizon Scanning databases, FDA website and INAHTA for published reports. Only studies published within 2000s to 2013 were included in this technology review report.

