Background

- The Fifth Organization to Assess Strategies in Acute Ischemic Syndromes Investigation (OASIS-5) trial demonstrated that fondaparinux is non-inferior to enoxaparin in reducing the risk of ischemic events at nine days, but substantially reducing major bleeding and improving long term mortality and morbidity.[1]

- For Thailand, enoxaparin has been the anticoagulant of choice in the acute coronary syndrome (ACS) setting.

- Critical appraisal is necessary important to justify adopting this new treatment in the era of limited healthcare resources.

Objective

- To evaluate long term cost-effectiveness of fondaparinux versus enoxaparin in non-ST elevation acute coronary syndrome (NSTE-ACS) patients in Thailand.

Methods

- A two-part decision-analytic model, comprising a one-year decision tree and a long-term Markov model, was constructed to estimate lifetime costs and quality-adjusted life years (QALYs) from both societal and provider perspectives.

- A one-year decision tree was used because the reduction of major bleeding from fondaparinux occurred rapidly after treatment based on the OASIS-5 trial.

- Markov model was used for year two and onwards under the assumption of no remaining treatment effect. The long-term effectiveness was estimated conditional on individual health states occurred during the first year.

- Costs of ACS 1st year: 59,405 THB 
  - Direct medical cost 1st year: 47,524 THB
  - Direct non-medical cost 1st year: 10,887 THB

- Costs of ACS 2nd year: 13,584 THB 
  - Direct non-medical cost 2nd year: 4,489 THB

- Utility
  - No revascularization with no major bleeding: 0.52
  - Revascularization with no major bleeding: 0.44
  - Death with major bleeding: 0.28
  - Major bleeding after revascularization: 0.13

- The study was supported by GlaxoSmithKline (Thailand); however, the sponsor has no role in directing the design, conducting model analyses, and interpreting the data.

Results

- Fondaparinux had lower costs while gained more QALYs than enoxaparin in both perspectives indicating that fondaparinux was a cost saving strategy.

- The results of probabilistic sensitivity analysis (PSA) showed that at a threshold of 160,000 THB (4,857.3 USD) in Thailand per QALY, fondaparinux had about 99% being cost-effective compared with enoxaparin in both provider and societal perspectives.

Conclusions

- Fondaparinux should be considered as a cost-effective alternative in the treatment of NSTE-ACS compared to enoxaparin based on Thailand’s context, especially in the era of limited healthcare resources.

References


[3] Present at the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) 6th Asia-Pacific Conference, Beijing, China, 6-9 September 2014

Disclosures

- The study was supported by GlaxoSmithKline (Thailand); however, the sponsor has no role in directing the design, conducting model analyses, and interpreting the data.