OBJECTIVES: Proper diagnosis of Deep Vein Thrombosis (DVT) at the earliest time is very important to its appropriate therapy can be initiated. Ultrasonography is the most widely used diagnostic technique. Noninvasive magnetic resonance direct thrombus imaging (MRDITI) is a new diagnostic technique that has higher sensitivity and specificity compared to Ultrasonography for distal deep vein thrombosis (DVT). The objective of this research was to evaluate the most cost-effective strategy for diagnosis of distal deep vein thrombosis.

METHODS: A decision-analysis model was constructed using TreeAge Pro software and analyzed using second-order Monte Carlo simulation technique. Diagnostic accuracy was calculated using Bayes’ revision method that utilized sensitivity and specificity of the diagnostic tests along with the pretest probability of developing the disease. Outcomes considered were costs, adverse events and quality of life. Quality-adjusted life years were calculated using life expectancy tables. Where applicable, costs in pounds were converted to US dollars and adjusted through use of Consumer Price Index data from Bureau of Labor Statistics. Net benefit of each strategy was analyzed at different willingness to pay (WTP) thresholds ($0 to $150,000) to determine the most cost-effective strategy. RESULTS: Noninvasive MRI is the optimal strategy for diagnosis of distal DVT at all WTP thresholds greater than $25,000. Sensitivity analysis showed that noninvasive MRI remained cost-effective even when all costs were varied by 25%. The model results were affected by the sensitivity of the diagnostic tests. CONCLUSIONS: For base-case scenario, noninvasive MRI is the most cost-effective strategy. Considering the cost-effectiveness and the fact that MRI has higher mortality compared to noninvasive MRI, health care providers should consider patient population distribution among the risk groups defined by Wells score for generalizing the study results to their setting.

COST-EFFECTIVENESS OF SEVELAMER IN THE TREATMENT OF HYPERPHOSPHATEMIA ASSOCIATED WITH CHRONIC KIDNEY DISEASE IN BRAZIL

Rivas R1, Idrovo J2, Zapata L1

1 Guía Mark, Mexico, DF, Mexico, 2 National Institute of Public Health, Cuernavaca, Morelos, Mexico

OBJECTIVES: The chronic kidney disease (CKD) is associated with an abnormally elevated level of phosphate in the blood, which contributes to the presence of vascular calcifications, thus increasing the probability of the occurrence of cardiovascular events and death in these patients. The objective of this analysis was to evaluate the incremental cost-effectiveness of the use of sevelamer to manage hyperphosphatemia in Brazil. METHODS: A Markov model was created to estimate the monthly costs and benefits of the treatment with sevelamer or calcium tablets in patients with renal failure considering a temporary horizon of 60 months. The transition probabilities were taken from clinical trials identified through a systematic review of literature. The failure considering a temporal horizon of 60 months. The transition probabilities were taken from clinical trials identified through a systematic review of literature. The model results were affected by the sensitivity of the diagnostic tests. CONCLUSIONS: The cost-effectiveness of sevelamer vs. calcium was US$1030 and with sevelamer was US$1280 respectively, and the incremental Cost-Effectiveness Ratio for the implementation of sevelamer vs. calcium was US$5021. ICER of sensitivity analysis doesn’t change more than 10% of original results. CONCLUSIONS: Sevelamer is a cost-effective drug for the treatment of hyperphosphatemia in patients with CKD in the Argentine context.