

التقييم الاقتصادي للاستخدام المشترك للوارفارين والجرعة المنخفضة من الأسبرين مقابل الوارفارين وحده في تركيبات الصمامات الميكانيكية

Economic Evaluation of the Combined Use of Warfarin and Low-dose Aspirin Versus Warfarin Alone in Mechanical Valve Prostheses

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Economic Evaluation of the Combined Use of Warfarin and Low-dose Aspirin Versus Warfarin Alone in Mechanical Valve Prostheses

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Abstract

Background: The use of combined therapy of antiplatelet and anticoagulant versus anticoagulant alone to reduce instances of thromboembolic events in patients with heart valve prostheses is an established standard of care in many countries but not in Egypt. A previous Markov model cost-effectiveness study on Egyptian patients aged 50-60 years demonstrated that the combined therapy reduces the overall treatment cost. However, due to the lack of actual real-world data on cost-effectiveness and the limitation of the Markov model study to 50- to 60-year-old patients, the Egyptian medical community is still questioning whether the added benefit is worth the cost.

Objective: To assess, from the perspective of the Egyptian health sector, the cost-effectiveness of the combined use of warfarin and low-dose aspirin (75 mg) versus that of warfarin alone in patients with mechanical heart valve prostheses who began therapy between the age of 15 and 50 years.

Methods: An economic evaluation was conducted alongside a randomized, controlled trial to assess the cost-effectiveness of the combined therapy in patients with mechanical valve prostheses. A total of 316 patients aged between 15 and 50 years were included in the study and randomly assigned to a group treated with both warfarin and aspirin or a group treated with warfarin alone.

Results: The patients in the combined therapy group exhibited a significantly longer duration of protection against the first event. Fewer primary events were observed in the patients treated with warfarin plus aspirin than in those treated with warfarin alone (1.4 %/year, vs. 4.8 %/year), and a higher mean quality-adjusted life-years (QALYs) value over 4 years was obtained for the group treated with warfarin plus aspirin (difference 0.058; 95 % CI 0.013-0.118), although this difference did not reach a conventional level of statistical significance. The total costs over a 4-year period were lower with the combined therapy (difference -US\$244; 95 % CI -US\$483.1 to -US\$3.8), which yielded an incremental cost-effectiveness ratio of -US\$4206 per QALY gained. Thus, the combined therapy was dominant. All costs were reported in US dollars (USD) for the financial year 2014.

Conclusions: The results of this analysis indicate that from the perspective of the Egyptian health sector, the addition of aspirin to the typical warfarin therapy is more effective and less costly for patients with mechanical valve prostheses than treatment with warfarin alone. This combined strategy could be adopted to prevent the complications of mechanical valve prostheses. Our study adds to the body of evidence supporting the option of warfarin-plus-aspirin therapy for patients with mechanical valve prostheses.