Abstracts

PHMS

ADVATE IS COST-EFFECTIVE INVESTMENT IN HEMOPHILIA A TREATMENT WHEN PATHOGENS Emerge—A SCENARIO-BASED ECONOMIC AND POSITIVE INVESTMENT INTERVAL (PII) EVALUATION
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OBJECTIVES: To evaluate the cost-effectiveness and Positive Investment Interval (PII) of ADVATE [Antihemophilic Factor (Recombinant), Plasma/Albumin-Free Method, PFM] as an on-demand/prophylactic modality for hemophilia A (HA) treatment compared to the best current Finnish treatment practice (Kogenate) in a scenario where a pathogen emerges and is transmitted trough non-PFM methods as the Hepatitis C virus (HCV) in the 1980’s. METHODS: Incremental cost-effectiveness analysis was performed using probabilistic simulation to depict uncertainty. Conservative information related to treatment practices, costs and survival in Finland were gathered from literature and clinical experts. HIV and HBV were excluded from the modeling, because only 2 HIVs have been transmitted through coagulant products to Finnish HA patients and efficient vaccinations against HBV infection exists. Our innovation, PII, is discussed elsewhere. Here, PII was used to assess the interval when the extra treatment costs of ADVATE are compensated by the treatment costs of emerging pathogen (i.e. interval when no pathogens should emerge, if non-PFM method is used). RESULTS: Current treatment practice was dominated by the ADVATE scenario. 18 years old HA male with and without pathogen transmission had survival estimates of 48 and 55 years, respectively. The expected difference in survival was 3.48 years (51% less pathogen transmissions). Mean treatment cost differences were 7,500–50,200 €/year and 213,700–2,381,600 €/lifetime favoring ADVATE. All PIIs for annual ADVATE investment favored ADVATE and were 1–7 years depending on patient’s weight, age, and treatment modality. When production losses and discounting of costs and effectiveness (5%) were included in sensitivity analysis, the relative differences increased (e.g. PIIs became 1–9 years due to production losses). CONCLUSION: ADVATE improves survival, is cost-effective and offers good long-term investment in the treatment of hemophilia A, when known/unknown pathogens transmitted through non-PFM methods emerge. When investment’s safety is of concern, PII offers new hands-on interpretation for the political discussion.

PHMS

COST SIMULATION OF NOVOSEVEN VERSUS FEIBA AND ITT-F8 FOR PRIMARY PROPHYLAXIS TREATMENT OF HAEMOPHILIA A/B PATIENTS WITH INHIBITORS
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OBJECTIVES: Haemophilia patients with inhibitors characteristically have high annual drug costs and other health care related costs. There are essentially three treatment options: NovoSeven, FEIBA or ITT followed by regular F8 treatment. Aim: This cost-minimization simulation examines the treatment costs of NovoSeven versus FEIBA and ITT/F8 for haemophilia A/B patients with inhibitors. METHODS: The simulation is based on a standard set of assumptions for an average severe haemophilia patient. First, primary prophylaxis treatment is defined by daily treatment on an annual basis of 50 iG/KG for NovoSeven and 40 IU/KG for FEIBA. ITT-F8 treatment follows the Bonn Protocol for ITT at 300 IU/KG followed by F8 at 15 IU/KG. Second, we assume 2 breakthrough bleed per month. Third, the patients weight changes each year throughout a 21 year child-adolescent-manhood life cycle time series model according to average yearly weight changes for boys in the standard population. Fourth, costs are based on estimated average global realised wholesaler purchaser prices in EUROS. ITT-F8 costs 0.7271 EUROS for an IU/KG. FEIBA costs 1.143216 EUROS for an IU/KG. NovoSeven costs 0.9191 EUROS for an iG/KG. Costs are also discounted at a rate of 3.5 percent a year over time. RESULTS: Annual N7 costs for a 70 KG patient are 990.662 EUROS per year. Annual FEIBA costs for a 70 KG patient are 1.168.367 EUROS per year. Annual ITT treatment is 11.146.504 EUROS and annual F8 treatment costs are 277.679 EUROS. CONCLUSION: NovoSeven is slightly cheaper compared to FEIBA for certain dosing regimens. NovoSeven is also cheaper than ITT-F8 for the first 6–7 years after treatment begins.