Prospective clinical and pharmacoeconomic outcomes study of different first-line antiretroviral treatment strategies

Klinische Publikation

Bickel M, Hoffmann C, Wolf E, et al. High effectiveness of recommended first-line antiretroviral therapies in Germany: a nationwide, prospective cohort study. *Infection*. 2020;48(3):453-461.

https://pubmed.ncbi.nlm.nih.gov/32394345/?from_term=Prophet+hoffmann&from_pos=2

https://link.springer.com/article/10.1007/s15010-020-01428-1

Abstract

Purpose: Current German/Austrian antiretroviral treatment guidelines recommend more than 20 combination regimens for first-line therapy, without a preference. Regimens include two nucleoside reverse transcriptase inhibitors (NRTIs) plus either an integrase strand transfer inhibitor (INSTI), a non-NRTI (NNRTI) or a boosted protease inhibitor (PI). The objective was to examine the outcomes of recommended first-line ART in Germany.

Methods: This nationwide observational study included treatment-naïve chronically HIV-1 infected patients receiving one of the recommended first-line regimens. Patients were allocated to three arms (INSTI, NNRTI, PI) and were prospectively followed for 24 months. Delayed treatment initiation was defined by a baseline CD4 T-cell count of < 350/µl or CDC clinical stage C.

Results: Among a total of 434 patients enrolled, virologic failure was rare and occurred in 4.3% (6/141) in the PI arm, in 3.3% (4/122) in the NNRTI arm and in 0.6% (1/171) in the INSTI arm (p = 0.10). De novo drug resistance mutations developed in only two patients in the NNRTI arm. Nonetheless, treatment modifications were frequent (51%) and mostly performed for strategic reasons. Retention on all initial compounds at month 24 was 64%, 49%, and 22% in the INSTI, NNRTI and PI arms respectively. Delayed treatment initiation was common (47%) and more frequently observed in patients in the PI arm. It was not associated with virological failure.

Conclusion: High efficacy and low virological failure rates were observed with recommended first-line regimens independent of delayed treatment initiation, chosen regimen and subsequent treatment modifications, demonstrating the validity of the current

treatment guidelines.

Gesundheitsökonomische Publikation

Frederik Valbert, Eva Wolf, Knud Schewe, et al. Cost of Human Immunodeficiency Virus (HIV) and Determinants of Healthcare Costs in HIV-Infected Treatment-Naive Patients Initiated on Antiretroviral Therapy in Germany: Experiences of the PROPHET Study. *Value Health*. 2020 Oct;23(10):1324-1331.

https://www.sciencedirect.com/science/article/abs/pii/S1098301520321355?via%3Dihub

https://www.valueinhealthjournal.com/article/S1098-3015(20)32135-5/fulltext?_returnURL=https%3A%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS1098301520321355%3Fshowall%3Dtrue

https://pubmed.ncbi.nlm.nih.gov/33032776/

Abstract

Objectives: The purpose of the prospective clinical and pharmacoeconomic outcomes study of different first-line antiretroviral treatment strategies (PROPHET) was to examine the healthcare costs of human immunodeficiency virus (HIV)-infected persons in Germany treated with different antiretroviral therapy (ART) strategies and to identify variables associated with high costs.

Methods: The setting was a 24-month prospective multicenter observational cohort study in a German HIV-specialized care setting from 2014 to 2017. A microcosting approach was used for the estimation of healthcare costs. Data were obtained via electronic case report forms. The costs were calculated from both the societal and the statutory health insurance perspective. Regression models were performed that took into consideration the impact of several independent variables.

Results: Four hundred thirty-four patients from 24 centers throughout Germany were included. Average annual healthcare costs were €20 118 (standard deviation [SD] €6451) per patient from the societal perspective (n = 336) and €17 306 (SD €4106) from the statutory health insurance perspective (n = 292). Expenditures for the ART medication had the highest impact. Total costs declined in the second year of therapy. There was a significant association between the amount of total cost and clinical or therapeutic variables from both perspectives; a diagnosis of acquired immune deficiency syndrome (AIDS) led to higher costs as well as the chosen ART strategy. Age also increased cost from the statutory

health insurance perspective.

Conclusions: The main cost driver of the healthcare costs for HIV-positive patients was antiretroviral drug expenses. Further variables that influenced the costs were identified. The results provide a detailed overview of the resource use of patients in the PROPHET cohort.
