ABSTRACT

Background and aims: New DAA treatments for HCV infection are highly efficacious, yet costly. Nevertheless, it is time to move from treating selected prioritized patients to strategies that include treatment of all HCV infected patients. To this end a lifetime multi-cohort model of 8125 real life HCV infected patients, enrolled in the DAA era, was used to assess two different HCV treatments’ policies: Policy 1: Treat all patients of the cohort in any stage of fibrosis (F0-F4). Policy 2: Treat first: patients who are prioritized by the EASL HCV CPG 2015; Wait and treat: the remaining patients when they would reach any of the F3 stage.

RESULTS

Resource consumption and costs. The use of health care resources are based on the real disease status of each real life patient entered the model and annual health care costs are calculated in a 10-year horizon. The incremental cost of the resources used for the implementation of the model was calculated from the perspective of the Italian National Health Service (INHS).

The Monte Carlo scenarios (10,000 simulations) were arranged on a cost-effectiveness plane. The cost-effectiveness of the model was expressed using the cost-effectiveness acceptability curve (CEAC). ICERs (incremental costs by incremental QALYs) were calculated.

OBJECTIVES

We conducted an evaluation of scenario treatment policies evaluation through cost effectiveness analysis of two treatment strategies based on different start times of DAA IFN free regimens for treatment of HCV chronic infection. A lifetime multi-cohort model of 8125 real life patients with chronic HCV infection consecutively enrolled in Italian Platform for the study of Viral hepatitis Treatment (PITER) framework was used for the treatment simulations scenarios with the final goal to design strategies of health policy then to consider pricing.

PATIENTS AND METHODS

A real life ongoing cohort of 8,125 patients from 93 public general hospitals and university medical centers in various Italian regions, who are consecutively enrolled in PITER HCV framework from May 2014 to December 2015 was used for the cost-effectiveness analyses: Sociodemographic and clinical data, related to the stage of liver disease are captured using the PITER electronic data-collection system which covers all clinical and therapeutic aspects of chronic HCV infection.

The DAA treatments’ policies were simulated: 1. Policy 2. Treat with DAA s of second generation regimens, (IFN-free treatments) all patients of the cohort in any stage of fibrosis (F0-F4) 2. Policy 2. Treat patients that are at F3/4 of fibrosis stage and those who are prioritized by the scientific guidelines first; wait and treat the remaining patients when they would reach the F3 fibrosis stage.

CONCLUSIONS

We evaluated the benefits and costs of two scenarios of health policies for DAA access, adopting a real-life cohort of patients to populate the Markov model. Because the cohort is a representative sample of patients in care, the one exceptions reflected in the results are those made for the model, and not assumptions made on a hypothetical population.

Treating HCV infection at early stages of fibrosis appeared to improve health outcomes and to be cost-effective. Cost-effectiveness increased significantly when varying the price of treatment regimens in early stages of fibrosis. For the price levels less than 75% of the base price applied in patients with F0-F2 fibrosis stage, Policy 1 become dominant (less costs and greater benefits in terms of QALYs, compared to Policy 2).