Incident cases

The cumulative number of incident cases between 2005 and 2015 was 1,496.

An important finding is that the newly diagnosed HIV-positive cases accounted in the NHIFA database represent only a fraction of the total number of patients with HIV infection registered by the NCE. The number of HIV-positive patients newly registered by the NCE and number of patients newly accessing dedicated healthcare services as apparent from the NHIFA database are presented in Figure 2.

Conclusions

This study has retrospectively showed that around 60% of the HIV-positive patients registered by the NCE throughout 30 years of the study period were actually benefited from health care services via the public health insurance system between 2005 and 2015. Crossable time gaps were revealed between the first registration of the HIV infection cases and access to dedicated healthcare services and antiretroviral therapies via the public healthcare system. Anomalous follow-up of patients diagnosed as HIV positive could provide valuable information about treatment patterns and resource use of this population.

The number of prevalent cases of HIV infection showed considerable increase over the investigated time period, which is clearly attributable to newly discovered cases, and indirectly, to the effectiveness of existing antiretroviral therapies. Male patients are by far predominant amongst HIV positives, representing almost 90%. First access to healthcare resources takes place mainly at the age of 20-39 years. The number of newly yearly deaths does not exceed extensively the number of AIDS-related deaths reported by the NCE. The cumulative drug utilization pattern observed in the study population is in line with the recommendations of the relevant therapeutic guidelines.

Limitations

Involving institutional privacy policies, NHIFA provides cumulative statistics only for categories for comprising at least 10 cases. The publishing practice limits the available dataset on deaths in the HIV-positive population.

Information on the treatment of the study population is somewhat limited, since drug dispensing data affiliated to in-patient care are not recorded in the NHIFA database. Nevertheless, this is thought to have minimal impact on the cumulative drug utilization ratios observed in this study.

Acknowledgement

We kindly acknowledge the professional support of Eszter Ügyfél from St. István and St. László United Hospital, Budapest, Hungary in detailled validation and Szabolcs Pete-Tóth from Janssen-Cilag Hungary Ltd. for coordination of publication.

Research protocol received ethical approval from the ETT TTKER under registration nr. 11444-2/2016/EKU (2035/16). The data reported here have not been presented previously.

Funding


Potential conflict of interest

Fruzsina Kősa, Péter Takács, Krysztof Tronczynski, Inge Duchesne are employees of the Sponsor Janssen Pharmaceuticals. Gabriella Merth, Gergő Merész, Péter Rózsa are employees of the independent consulting company MedConcept Ltd which received funding for contribution to the study design and data analysis. The fee for data extraction from the MFH database has been covered by the Sponsor. János Ügyfél has been an advisory board member consultant/lecturer for or received research support from JanssenCilag, Gilead Sciences, MSD, and GSK.

First results from a retrospective study on the epidemiology of the Hungarian HIV infected population

Kősa F1, Takács P1, Tronczynski K2, Duchesne I3, Kasza K1, Merth G3, Merész G1, Rózsa P1, Szlávik J4


Background

The National Centre for Epidemiology (NCE) provides basic information about the epidemiology of the registered HIV-infected patients in Hungary, but there is no information regarding the size or characteristics of the patient population who eventually get access to healthcare services. The NCE report reflects a number of 3,163 HIV-positive persons registered since 1986 by the end of 2015. Available statistics, however, do not report the prevalence of HIV infection, and do not reflect the number of infected patients died from causes other than AIDS. These limitations lead to difficulty in estimating the actual number of HIV-positive patients both requiring, and accessing specialized healthcare services and treatment.

Methods

This was a non-interventional retrospective claims database study of patients registered at the National Health Insurance Fund Insurance of Hungary due to their HIV infection between 01.01.2005. and 31.12.2015. Hungary has a comprehensive public health insurance system covering the total population, and Hungarian laws grant public data access.

Objectives

The objective of this presentation is to report, as preliminary results of the HEARTS, the main epidemiological characteristics of the HIV-positive population, and the pattern of dedicated pharmacological treatment received through the public healthcare system in Hungary.

Results

Prevalent cases

A total number of 1,772 patients have been identified as prevalent cases throughout the period of 1.1.2005 – 31.12.2015. The number of prevalent cases showed a vast majority (98.8%) of the treated patients received at least once a nucleoside reverse transcriptase inhibitors, predominantly lamivudine, tenofovir or zidovudine.

Table 1. Epidemiological characteristics of the study population

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Number of patients receiving ART (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nelfinavir</td>
<td>0.9%</td>
</tr>
<tr>
<td>Saquinavir</td>
<td>1.1%</td>
</tr>
<tr>
<td>Darunavir</td>
<td>2.1%</td>
</tr>
<tr>
<td>Nelfinavir+saquinavir</td>
<td>0.1%</td>
</tr>
<tr>
<td>Saquinavir+nelfinavir</td>
<td>0.0%</td>
</tr>
<tr>
<td>Nelfinavir+darunavir</td>
<td>1.9%</td>
</tr>
<tr>
<td>Saquinavir+darunavir</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Figure 3. Distribution of newly diagnosed HIV positive patients between 2007 and 2015 per age groups and gender

Mortality

In the study period, a total of 120 patients died of the 1772 HIV-positive patients (6.8%) registered during the period of 1.1.2005 – 31.12.2015. The number of AIDS-related deaths reported by the NCE, which is clearly attributable to newly discovered cases, is 91.7% of the deceased were male, with the largest age group the 40-49 years. From data presented in Table 1 it can be seen that, when reported, the annual number of deaths amongst patients of AIDS in Hungary.

Table 2. Number of patients receiving ART therapy between 2005-2015 (% of HIV positive population)

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Number of patients (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zidovudine+lamivudine</td>
<td>16.0%</td>
</tr>
<tr>
<td>Zidovudine+lamivudine+nevirapine</td>
<td>15.0%</td>
</tr>
<tr>
<td>Zidovudine+lamivudine+nevirapine+lopinavir</td>
<td>15.5%</td>
</tr>
<tr>
<td>Zidovudine+lamivudine+nevirapine+lopinavir+valganciclovir</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

Figure 4. Cumulative utilization rates of antiretroviral agents between 2005 and 2015

Source of data

The National Health Insurance Fund Administration (NHIFA) database was collected to all individual patient records associated with ICD codes relevant for HIV infection (B20-B24, J05.0, Z21.95, Z21.75). ICD codes relevant for medical procedures (25568 for HIV viral load determination, with molecular biological methods, 26120 for verification or confirmation of HIV antibodies), and dispensed prescriptions of antiretroviral therapies (ART).

Patient inclusion

All patients being subjected to HIV viral load test within the predefined time period were considered as having a verified HIV infection and included in the study population. Viral load determination in the clinical practice is performed after the HIV infection is verified, therefore this inclusion method allowed us to eliminate patients who only appeared for screening at the outpatient clinics.

Case definitions

The total number of HIV infected patients (prevalent cases) was accounted as the total number of identified HIV positive patients censored by either the patient's death or end of the observation period. The patient's death was derived directly from the NHIFA SON (social security number) database. The case definition of newly diagnosed HIV infection (incident cases) accounted for patients with the first existing viral load test in the study period after a no-test period of 24 months. Patients who had a record of dispensed prescription of ART within the observation period were considered to have been treated in the study period. ART included all types of nucleoside antiretroviral therapeutics (i.e. nucleoside reverse transcriptase inhibitors, non-nucleoside reverse transcriptase inhibitors, protease inhibitors, integrase inhibitors, fusion inhibitors and HIV entry inhibitors) having valid Marketing Authorization in Hungary.

Figure 1. Evolution of the number of prevalent HIV positive cases per gender between 2005 and 2015

Figure 2. Number of HIV positive patients newly registered by the NCE and number of patients newly accessing dedicated healthcare services

Objective

As can be seen in Figure 1, the proportion of male patients was overwhelming in the HIV positive population, and increased as prevalent cases throughout the period of 1.1.2005.–31.12.2015. The number of prevalent cases showed a steady increase over the investigated time period, which is in line with the recommendations of the relevant therapeutic guidelines.