CROHN’S DISEASE IN GERMANY: A CLAIMS DATA ANALYSIS OF THERAPIES WITH BIOLOGICAL AGENTS

Wolber S1, Schleich W2, Rex J2, Vollmer L3,4

1 MA&S Market Access & Pricing Strategy GmbH, Weil am Rhein, Germany
2 State University Baden Württemberg, Loerrach, Germany
3 Elevation Health Analytics, Berlin, Germany
4 University of Applied Sciences, Rottenburg/Neckar, Germany

Corresponding author: Dr. Stefan Wolber
MA&S Market Access & Pricing Strategy GmbH
Geffen/Schäffler 6
79576 Weil am Rhein
Germany
Contact: stefan.wolber@marketaccess-pricingstrategy.de

BACKGROUND:

- Crohn’s disease (CD) is a chronic inflammatory disease that is not curable at the moment [1].
- This study provides information on the current supply with biological agents and their related costs (other medication, outpatient care, hospital admission) in Germany.

METHODS:

- The design is a retrospective claims data analysis.
- The data source is the database of the Institute for Applied Health Research (IHI) Munich, which includes claims data of 6.7 million insured persons who originate from 63 statutory health insurance companies in Germany. The observation period was from 2012 to 2016 and analyses were performed by the Institute. A sample with approximately 4 million insured persons was drawn and stratified by age and gender according to the official demographic structure of the German statutory health insurance population (DeGesit, Dec. 31st, 2013).
- The target population consists of patients who met following criteria with regard to the observation period from 2012 to 2016:
  1. Main diagnosis of CD (using relevant ICD-10 codes according to Table 1), and/or
  2. Treatment with approved biological agent for CD (at least for three months).
- If the diagnosis occurred before 2012 patients were only selected if they were already on treatment at the beginning of the observation period in 2012.
- The relevant patient sample was then split into three groups with regard to the observation period from 2012 to 2016:
  1. Patients who start a biological treatment (“New”)
  2. Patients who get continuous treatment with the same biological (“Repeater”)
  3. Patients who switch biological (“Switcher”)
- In sum, 1,721 patients could be included in the sample.
- The study evaluated direct medical costs (drugs, outpatient care and hospital admission), hospital admission and change in medication.
- Treatment costs included costs for biological agents which were approved for the treatment of CD (as of April 2017, see also Table 2).
- Furthermore, the following medication groups were considered to be CD-related (see also Table 3): Corticosteroids acting locally (ATC-Code A07EA), Aminosalicylic acid and similar agents (ATC-Code A07EC), Purine analogues (A07BB02), Selective immunosuppressants, Non-steroidal anti-inflammatory drugs (ATC-Code M01AB, M01AD, M01AH) and Analgesics (ATC-Code N02).

RESULTS:

- Most patients with CD are aged between 18 and 45, thereby the proportion below 17 years’ account for 4%. The average age of all age cohorts is 37.5 years, with the subgroup of men slightly younger than women (37.0 yrs vs. 38.0 yrs women).
- The proportion of women is slightly higher than that of men (53.3% female vs 46.7% male) (see also Figure 2).

CONCLUSIONS:

- Adalimumab and infliximab are administered mostly to patients who are already on treatment (in 2015 adalimumab 57.6% vs. infliximab 39.9%).

REFERENCES:


Table 1: Selection criteria of target population according to ICD-10 codes (2)

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>K50.-</td>
<td>Crohn disease (regional enteritis)</td>
</tr>
<tr>
<td>Excludes:</td>
<td>Ulcerative colitis (K51.-), Indeterminate colitis (K52.3)</td>
</tr>
</tbody>
</table>

Clinical subgroups:

- Crohn-disease of small intestine (K55.1)
- Crohn-disease of large intestine (K55.1)
- Other Crohn diseases (K55.6-9)
- Indeterminate colitis (K52.3)

Table 2: Overview of approved biological agents for CD (3)

<table>
<thead>
<tr>
<th>Product</th>
<th>Active substance</th>
<th>ATC-Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remedia®</td>
<td>adalimumab</td>
<td>L04AB04</td>
</tr>
<tr>
<td>Simponi®</td>
<td>golimumab</td>
<td>L04AB06</td>
</tr>
<tr>
<td>Filzira®</td>
<td>certolizumab pegol</td>
<td>L04AB02</td>
</tr>
<tr>
<td>Remicade®</td>
<td>infliximab</td>
<td>L04AB02</td>
</tr>
<tr>
<td>Solentis®</td>
<td>vedolizumab</td>
<td>L04AB02</td>
</tr>
<tr>
<td>Dupixten®</td>
<td>dupilumab</td>
<td>L04AB02</td>
</tr>
</tbody>
</table>

Table 3: CD-related medication groups

<table>
<thead>
<tr>
<th>Medication group</th>
<th>ATC-Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corticosteroids acting locally</td>
<td>A07EA01 – A07EA07</td>
</tr>
<tr>
<td>Aminosalicylic acid and similar agents</td>
<td>A07EC01 – A07EC04</td>
</tr>
<tr>
<td>Purine analogues</td>
<td>L04AB02</td>
</tr>
<tr>
<td>Selective immunosuppressants</td>
<td>L04AA06</td>
</tr>
<tr>
<td>Non-steroidal anti-inflammatory drugs</td>
<td>M01AB01 – M01AB07, M01AD01 – M01AD17, M01AH01 – M01AH03, M01AH05, M01AH07</td>
</tr>
</tbody>
</table>

Figure 1: Overview of analysis

Figure 2: Patient characteristics

Figure 3: Yearly treatment costs of patients with CD (in €)

Figure 4: Yearly numbers of hospital admissions / patients with hospital admission(s) due to CD, and their costs

The poster is available on