Background

- Untreated Cushing's disease (CD), which results from excessive adrenocorticotropic hormone (ACTH) secretion by pituitary tumor, is associated with substantial morbidity and mortality. 1
- Treatment of this rare disorder includes surgery, radiotherapy, or pharmacologic therapy.2
- Data on real-world treatment patterns for CD in United States are limited.2

Objective

To analyze treatment patterns in CD using a novel graphical technique.

Methods

Study Design and Data Sources

- Retrospective cohort study using 2 HIPAA-compliant United States claims databases (Thomson Reuters MarketScan Commercial, IMS Health PharMeX).

Study Population and Study Design

Inclusion Criteria:

- Newly treated in ID period.

Exclusion Criteria:

- No CD treatment in 12 months prior to the first CD treatment (Day 1), and Continuous enrollment for all months prior to Day 1.

Study Cohort and Characteristics

- 228 newly treated CD patients, with mean age of 41 years (SD: 14.5 years), 76.7% (175) were female.

Results

Observed Treatment During the 3-Year Follow-Up Period

- As their first treatment, 78.9% had surgery, 18.4% had pharmacologic treatment, and 2.5% had radiotherapy.
- In 180 patients with surgery as first treatment, 8.3% had radiotherapy and 7.5% had pharmacologic treatment during follow-up.
- In 42 patients with pharmacologic therapy as first treatment, 23.8% had surgery and 4.8% had radiotherapy during follow-up.

Mean treatment duration of pharmacologic therapy included medical treatment: 385.5 days (240) for dopamine agonists, 157.1 (30) for ketoconazole, 30.3 (30) for mitotane.

Observed Treatment Patterns in Newly Treated CD Patients (N=228) by First Treatment Observed During the 3-Year Follow-Up Period

- 78.9% had surgery as 1st treatment, and up to 85.6% of these patients had no follow-up treatment during the observation period.
- Majority of patients were followed until the end of enrollment or up period.
- Observations were reviewed for segment length and changes in colors to evaluate treatment patterns over time.

Conclusions

- This study addresses an unmet need for data on real-world treatment patterns and duration for CD patients in the US.
- Data were provided for actual treatment rates and duration in a large sample of CD patients (228 newly treated patients) using two nationwide databases.
- The majority of patients (75.3%) had surgery as their first treatment, and up to 85.6% of these patients had no follow-up treatment during the observation period.
- Those treated with pharmacologic therapies as their first treatment were often poorly persisted in their regimen, which may have contributed to up to 34.5% of these patients receiving >1 treatment.
- Patient-level graphical analysis of individual patient histories over time using GRAPHX provided detailed information on treatment patterns and insights about adherence and persistence of treatment in commercially-insured CD patients in the US.
- Future studies of treatment patterns for CD in the US will include evaluation in additional databases, also including retrospective chart reviews.

References


LIMITATIONS

- Limited duration of continuous patient enrollment, characteristic of claims databases, does not allow for review of earlier therapies (e.g., an earlier surgery for CD that may have been provided under different health plans and also limits length of follow-up period.

- This study is based on healthcare claims, without verification in medical charts.

- This study included patients with commercial insurance, so the results may not be representative of the general CD population.

- Healthcare claims represent medications purchased, not necessarily those taken.

- Observations were followed until the end of enrollment or up period.

- No claim for CD treatment in 12 months prior to the first CD treatment (Day 1), and Continuous enrollment for all months prior to Day 1.

- Mean treatment duration of pharmacologic therapy included medical treatment:
  - dopamine agonists: 385.5 days (240)
  - ketoconazole: 157.1 (30)
  - mitotane: 30.3 (30)

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References