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Triptan Switches for Danish Migraine Patients Treated with at Least Three Distinct Triptans before Discontinuation – a Register Based Study

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BACKGROUND

- Migraine is a prevalent and debilitating disease worldwide, ranked second in the world among the causes of years lost to disability.[1,2]
- In Denmark, triptans are second-line treatment for migraine, used when non-steroidal anti-inflammatory drugs are insufficient, with guidelines recommending trial of three different triptans, each on three separate attacks, before effectiveness of triptans is ruled out.[3-5]
- Some patients discontinue treatment with triptans presumably due to lack of effect. However, knowledge about these patients' "triptan treatment pattern" before discontinuation is limited.

OBJECTIVE

- In this population-based register-based study, we examined switches between triptans among Danish patients who have tried at least three distinct triptans before discontinuation to assess the likelihood of returning to triptans they have been exposed to previously.

METHODS

STUDY DESIGN AND DATA SOURCES

- Nationwide data were retrieved from the exhaustive and comprehensive Danish national registers. We assumed triptans (defined by ATC codes: N02CC01–N02CC07) to be prescribed only for migraine.
- The study included all individuals (≥18 years) discontinuing redemption of triptans between 1998 and 2019 identified in the Danish National Prescription Register. Patients were included if they redeemed three or more unique triptans before discontinuation. Patients redeeming triptans in the period 1995–1997 were excluded, to ensure that only patients starting and discontinuing triptan treatment within the relevant period were included.
- Discontinuation was defined as no further redemptions for at least a two-year period and until the end of follow-up ultimo 2021.

STATISTICAL ANALYSIS

- Using the National Prescription Register's information about ATC-code and the date of each redemption, the number and sequence of switches were used to estimate the mean number of switches between triptans. In addition, the distribution, in terms of deciles, of the number of switches were estimated.

Table 1. Characteristics of people with migraine discontinuing treatment with triptans after three or more triptans

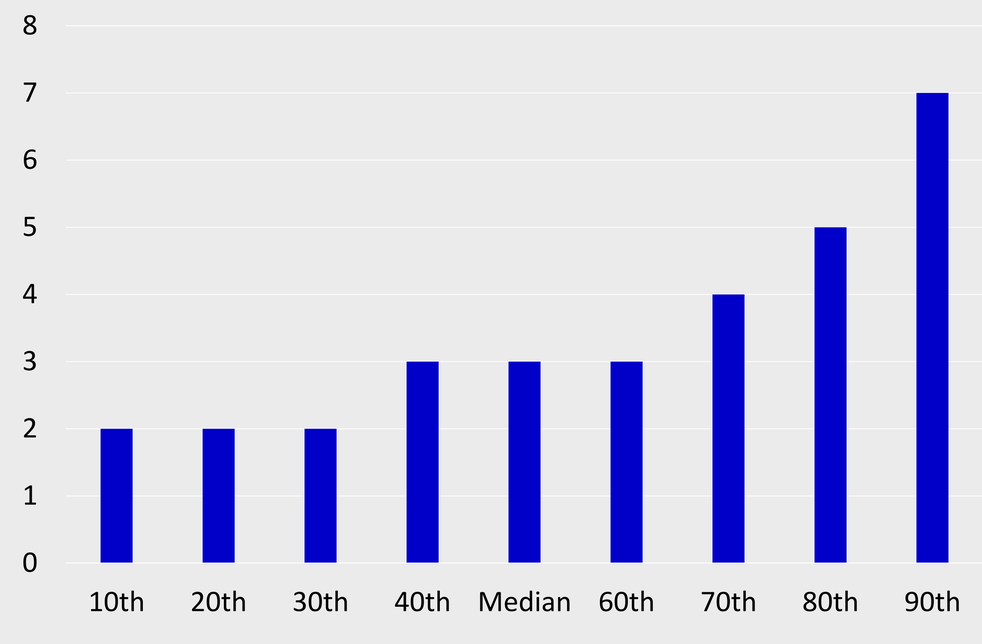
N	7,871
Age at index, median (IQR)	36 (28, 44)
Gender	
Women	6,656 (85%)
Men	1,215 (15%)
Number of redeemed triptans	
3	6,079 (77%)
4	1,459 (19%)
5	280 (3.6%)
6	40 (0.5%)
7	13 (0.2%)

Abbreviation: IQR: interquartile range

RESULTS

- 211,026 patients acquired at least one triptan during the study period, of whom only 7,871 were identified as using at least three distinct triptans before discontinuation. Of the 7,871, 77.2% (n=6,079) used three, 18.5% (n=1,459) used four, and 4.2% (n=333) used five or more distinct triptans (Table 1).
- Compared to the gender distribution in people with migraine in general,[3] relatively many women (85%) tried three or more triptans before discontinuation.
- Among the 7,871, the mean number of switches between triptans was 4.6 and the median was 3.

Figure 1. Distribution of the number of triptan treatment switches



DISTRIBUTION OF TREATMENT SWITCHES

- From Figure 1 it is seen that 30% of the patients only switched twice indicating treatment with three distinct triptans sequentially. As 77% of the patients only used three distinct triptans, the distribution presented in Figure 1 also demonstrates that many patients switched back and forth between the same three triptans.
- However, 20% of patients had five or more switches and, among the 10% of patients with most switches, seven or more switches were observed.

STRENGHTS AND LIMITATIONS

- The Danish national registers and not least the National Prescription Register have been recognized for providing real-world data that are considered to be among the most extensive and comprehensive of their kind.[6]
- Contrary to for example survey data, the use of the National Prescription Register data collected prospectively mitigates biases related to selection and information and eliminates recall errors.

CONCLUSIONS

- The findings indicate that, while few patients using triptans try at least three distinct triptans, most of those who do return to triptans they have tried and switched from previously.
- This pattern suggests patient awareness of differences between distinct triptans in effectiveness and/or tolerability, with eventual choice of triptan influenced by experience of two or three others but rarely more.
- Further research is needed for better understanding of the optimal treatment sequence – if there is one – and of the optimal switching regimen to better support patient care.

REFERENCES

1: Ashina et al. N Engl J Med. 2020;383(19):1866–76. 2: IHME GBD 2019. 3: Schytz et al. J Headache Pain 2021;22:22. 4: Eigenbrodt et al. Nat Rev Neurol 2021;17:501–14. 5: Steiner and Martelletti. J Headache Pain 2007;8 Suppl 1:1–47. 6: Schmidt et al. Clin Epidemiol 2015;1:449.

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CONFLICTS OF INTEREST

MA reports receiving personal fees from AbbVie, Amgen, Astra Zeneca, Eli Lilly, GlaxoSmithKline, Lundbeck, Novartis, Pfizer and Teva Pharmaceuticals and reports serving as associate editor of Cephalalgia, associate editor of The Journal of Headache and Pain, and associate editor of Brain. JMH reports receiving personal fees from Pfizer. TFH reports no conflicts. DSH and USL are current employees of Pfizer Denmark and may own shares in Pfizer Inc. TJS is co editor of the Journal of Headache and Pain, a director and trustee of Lifting The Burden, and reports receiving personal fees from Eli Lilly and Pfizer.

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