Incidence of Treatment Resistant Schizophrenia in a Community Sample Using the TRRIP Consensus

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Background

Estimates of treatment resistant schizophrenia (TRS) vary due to lack of consensus definition. The Treatment Response and Resistance in Psychosis (TRRIP) consensus provides a rigorous prospective definition for TRS (Howes, et al. 2016). We provide a prospective estimate of the incidence of TRS in a large community cohort using TRRIP by repurposing the Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) dataset (Lieberman, et al. 2005). In CATIE, an exclusion criterion was “clinical evidence” of treatment resistance.

Methods

- CATIE data retrieved for all available participants
- Pre-processed using custom scripts to extract trajectories for:
  - Social and Occupational Functioning (SOF)
  - PANSS symptoms scores (Sx)
  - Adequate Treatment Trials (Rx)

Each participant assessed and classified using an event model to ascertain TRS state throughout trial.

Participants deemed to have TRS must

- “Trigger” absolute Sx and SOF TRRIP threshold at some time
- Then, have at least 2 adequate trials of different medications
- With Sx and SOF remaining above threshold and < 20% response in PANSS

In a population of participants with chronic schizophrenia:

- Treated with antipsychotic medications for a median of 13 years (IQ = 18)
- Median age 42 (IQ = 17)
- Where clinical history of treatment resistance was excluded

Applying a prospective algorithm for TRS revealed a population crude incidence rate of 5.42 per 100 person years. A majority of the 71 TRS participants were resistant in both positive and negative symptom domains.

Conclusion

In a population of participants with chronic schizophrenia:

- Treated with antipsychotic medications for a median of 13 years (IQ = 18)
- Median age 42 (IQ = 17)
- Where clinical history of treatment resistance was excluded

Applying a prospective algorithm for TRS revealed a population crude incidence rate of 5.42 per 100 person years. A majority of the 71 TRS participants were resistant in both positive and negative symptom domains.

Limitations

- Right censored cases (N = 197) only had 1 adequate trial, but a proportion may have converted to TRS
- SOF was approximated from available CATIE variables which map to PSP / SOFAS scales
- Maximum concordance recorded in CATIE was 75% (TRRIP specifies 80%)

Reproducibility

Code and derived data used in these analyses will be made available via www.danwjoyce.com

We gratefully acknowledge the NIMH Trial Datasets, which are available from https://data-archive.nimh.nih.gov/ndctr/

References


Missing Data

N = 1436 In total, 94 participants were missing one or more items on demographic and baseline data used in (Lieberman, et al 2005).

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