

Polarity Index: A Novel Bipolar Metric: Is it Clinically Useful?

Sir,

Polarity index (PI) is a recently developed metric

for bipolar disorders that aims to guide clinicians in choosing optimal management strategy particularly for long-term maintenance treatment. PI is derived by

dividing the number needed to treat (NNT) for the prevention of depressive episodes by the NNT for the prevention of manic episodes. Drugs with a PI superior to one have stronger anti-manic versus anti-depressant prophylactic properties, whereas those with PI inferior to one are more effective for preventing depressive episodes than the manic ones. Drugs with the PI of one may have a comparable anti-manic and anti-depressive potential.^[1] A few examples of pharmacological agents with calculated PI include 12.09 for risperidone, 1.39 for lithium, 1.14 for quetiapine, and 0.40 for lamotrigine.^[1] Similarly, PI for psychological interventions include 0.33-0.89 for cognitive-behavioral therapy and 0.73-0.78 for psychoeducation.^[2]

The clinical utility of PI has been a matter of intense debate in the recent times. A recent study on a large sample of bipolar patients demonstrated the usefulness of PI in clinical decision-making. The study demonstrated that the treatment of patients with mania predominant polarity was oriented mostly toward mania prevention, as evidenced by higher PI, while treatment of depression predominant polarity patients was characterized by lower mean PI and hence directed toward preventing depression.^[3] The ultimate motive of incorporating evidence-based medicine to clinical practice in psychiatry has also been lauded by several clinicians and researchers.

However, there are multiple arguments against usefulness of PI as a bipolar metric in clinical practice. Most importantly, summarizing the therapeutic response to medication for a complex heterogeneous entity like bipolar disorder can be potentially misleading. Furthermore, combining results of different trials in calculation of PI is likely to result in oversimplification. Multiple factors, including the polarity of the index episode, number of previous episodes, time since last episode, baseline severity of mood symptoms, dropout rates, treatment adherence characteristics and duration of prospective follow-up may influence the results of different trials and hence not accounting for the above confounders can result

in poor validity in calculation of PI.^[4] Hence, many authors are skeptical about the clinical utility of PI though it could be a potentially valuable construct. Future research is likely to provide more insight into this interesting debate and it need not be again emphasized that developing novel metrics that would aid psychiatric clinicians in their decision-making process is a step in the right direction.


Sundar Gnanavel

Department of Psychiatry, AIIMS, New Delhi, India

Address for correspondence: Dr. Sundar Gnanavel,
Department of Psychiatry, AIIMS, Ansari Nagar,
New Delhi - 110 029, India.
E-mail: sundar221103@yahoo.com

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