Age at onset of first episode and time to treatment in in-patients with bipolar disorder

Gunnar Morken, Arne E. Vaaler, Gunn E. Folden, Ole A. Andreassen and Ulrik F. Malt

Summary
This study aimed to investigate the relationship between age at onset and time to first pharmacological treatment in patients with either bipolar I or II disorder. A total of 146 consecutive in-patients acutely admitted from the same catchment area were included. Patients were divided into four age groups: 0–12 years (23%); 13–18 years (32%); 19–29 years (26%); and 30 years and over (18%). Mean age at first affective episode was 20.2 years (s.d. = 11.8). This represents a similar pattern to the age at onset seen in out-patients in the USA. Early age at onset predicted a longer time to first pharmacological treatment (p = 0.695, P < 0.01).

Declaration of interest
None.

Method
The acute ward of the Østmarka Department of Psychiatry, St Olavs University Hospital, Trondheim, Norway, has a catchment area of 140,000 inhabitants. Norwegian acute psychiatric services are available to everyone and acute admission to other psychiatric hospitals occurs only when inhabitants temporarily reside outside of the catchment area. The Department is a partner of the Bipolar Disorder (STEP–BD):5 childhood (0–12 years); adolescent (13–18 years); young adult (19–29 years); and adult (≥ 30 years). The STEP–BD combined the two older groups. Written, informed consent was obtained from all participants. The study was approved by the Regional Committee for Research Ethics, Middle Norway.

Consecutive patients admitted to the hospital between November 2002 and September 2007 with current or past hypomania, mania, mixed episodes or depression were diagnosed by the Structured Clinical Interview for the DSM–IV (SCID–1).8,9 All patients with either bipolar I or II disorders were included. No exclusion criteria existed. All diagnoses were confirmed in a weekly consensus meeting where at least two senior psychiatrists with expertise in SCID, at least one of whom knew the patient, participated. The patients were interviewed with a Norwegian adaptation of the Network Entry Questionnaire used by the Bipolar Collaboration Network (BCN).10 The age at onset was defined as ‘their first depressive symptoms associated with dysfunction (a definition that would be likely to meet DSM–IV criteria), as well as their first hypomanic or manic symptoms similar to those experienced in adulthood’.1,3 Information was also collected from the patients’ families and records. First pharmacological treatment for depression or hypomania/mania and age at first admission to a psychiatric department for an affective episode were recorded. Psychosis was defined as lifetime admission to hospital with a psychotic illness. The patients were divided into four groups according to age at onset, defined much as in the BCN:1,3 and the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP–BD):5 childhood (0–12 years); adolescent (13–18 years); young adult (19–29 years); and adult (≥ 30 years).

Results
Demographic and clinical characteristics for the four age groups are presented in Table 1 and online Table DS1. The duration from onset to first pharmacological treatment (p = 0.695, P < 0.01) and the duration from onset to first admission to hospital (p = 0.677, P < 0.01) were inversely correlated with age at onset.

Patients with lifetime psychosis were younger at first treatment (mean 27.6 v. 31.2 years, P = 0.050) and first admission to hospital (29.2 v. 35.8 years, P < 0.001) and had shorter time to first treatment (7.2 v. 10.9 years, P = 0.038) and to first admission to hospital (8.9 v. 15.7 years, P = 0.001). Patients with rapid cycling were younger at first episode (15.4 v. 21.7 years, P = 0.005) and at first treatment (25.2 v. 30.5 years, P = 0.016) and had shorter time to first admission (8.9 v. 15.7 years, P = 0.001). Patients with bipolar I disorder were younger at first admission (30.5 v. 36.3 years, P = 0.024) and had a shorter time from first episode to first admission (10.7 v. 16 years, P = 0.015) than patients with bipolar II disorder.

Discussion
The proportion of patients with childhood onset was similar (23%) to that in the STEP–BD study from the USA (27.7%)5 and from US centres of the BCN study (22%),1 but differed from European centres (The Netherlands and Germany) of the same BCN study (2%).1

The mean age at first treatment was 26 years among patients with onset before 30 years of age. This finding is similar to that

559

https://doi.org/10.1192/bjp.bp.108.054452 Published online by Cambridge University Press
of the BCN study (estimated 27 years) and indicates a long period with inadequate treatment for patients with early-onset bipolar disorder, or that patients with a young age at onset have a slower symptom development or fewer characteristic symptoms.

The distribution of time to first treatment between age groups was much the same as in USA and European out-patients, illustrating that there is a problem treating patients early enough in countries such as Norway, where everyone has access to health services.

A limitation of the study was that data were based on retrospective information from patients.

Age at onset of the first affective episode is much the same in Norwegian in-patients as in out-patients in the USA. Time from the first affective episode to the first pharmacological treatment and to the first hospital admission was inversely correlated with the age at first affective episode. This indicates a need for more focus on the early phases of bipolar disorder in psychiatric services.

### Table 1 Demographics of patients with bipolar disorder of childhood, adolescent, young adult and adult onset

<table>
<thead>
<tr>
<th>Age group</th>
<th>Childhood (0–12 years)</th>
<th>Adolescent (13–18 years)</th>
<th>Young adults (19–29 years)</th>
<th>Adults (&gt;30 years)</th>
<th>Total sample</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients, n (%)</td>
<td>34 (23)</td>
<td>47 (32)</td>
<td>38 (26)</td>
<td>27 (18)</td>
<td>146</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age at index admission, years: mean (s.d.)</td>
<td>39.6 (13.1)</td>
<td>38.6 (14.3)</td>
<td>38.6 (11.9)</td>
<td>52.9 (10.3)</td>
<td>41.5 (13.7)</td>
<td>9.02</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Age at onset of first episode, years: mean (s.d.)</td>
<td>8.0 (2.3)</td>
<td>15.3 (1.7)</td>
<td>22.2 (3.0)</td>
<td>41.3 (7.0)</td>
<td>20.2 (11.8)</td>
<td>459.1</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Age at first treatment, years: mean (s.d.)</td>
<td>26.6 (8.8)</td>
<td>26.4 (10.8)</td>
<td>25.8 (6.6)</td>
<td>42.7 (7.1)</td>
<td>29.4 (10.8)</td>
<td>25.1</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Time to first treatment, years: mean (s.d.)</td>
<td>18.6 (8.8)</td>
<td>11.1 (11.2)</td>
<td>3.5 (5.5)</td>
<td>1.7 (3.7)</td>
<td>9.0 (10.3)</td>
<td>27.4</td>
<td>&lt;0.001***</td>
</tr>
<tr>
<td>Age at first admission, years: mean (s.d.)</td>
<td>32.2 (10.1)</td>
<td>29.5 (11.8)</td>
<td>28.2 (8.3)</td>
<td>44.0 (7.8)</td>
<td>32.5 (11.4)</td>
<td>15.9</td>
<td>&lt;0.001***</td>
</tr>
<tr>
<td>Time to first admission, years: mean (s.d.)</td>
<td>24.2 (10.5)</td>
<td>14.2 (11.9)</td>
<td>6.0 (7.9)</td>
<td>2.7 (4.4)</td>
<td>12.3 (12.3)</td>
<td>32.8</td>
<td>&lt;0.001****</td>
</tr>
</tbody>
</table>

*P<0.001 between all groups; **P<0.001 between adults and every other group; ***P=0.011 between childhood and adolescents; P=0.001 between childhood and young adults, and adolescents and adults; ****P<0.001 between childhood and young adult, and between adolescent and adult; P=0.002 between adolescent and young adult.

### References