

P01-244

MOOD-DEPENDENT CHANGES OF SERUM LITHIUM CONCENTRATION IN A RAPID CYCLING PATIENT MAINTAINED ON STABLE DOSES OF LITHIUM CARBONATE

H. Rittmannsberger<sup>1</sup>, G. Malsiner-Walli<sup>2</sup>

<sup>1</sup>OÖ LNK Wagner-Jauregg, <sup>2</sup>Institute of Applied Statistics, Johannes-Kepler-University, Linz, Austria

**Introduction:** Serum concentration of lithium may change according to mood states in bipolar patients, leading to reduced serum levels of lithium during manic periods.

**Objective/aims:** Documentation of mood states and serum lithium levels in a rapid cycling patient

**Methods:** We report about a 58 year old female patient with rapid cycling disorder whose mood altered every 20 to 30 days. No treatment has been effective until now. The patient is treated with a stable combination of clozapine 200mg, valproate 1500mg and lithium carbonate 450mg. Noncompliance can be ruled out since intake of medication is supervised. For 13 months a mood diary was performed by a relative using a simple scale for mood which rated neutral mood with 0, mania with +1, +2 and +3 (highest mania) and depression from -1 to -3 (deepest depression). Lithium levels were obtained first on a monthly, later on a weekly to two-weekly basis.

**Results:** Over a period of 13 months 7 depressive and 6 manic phases could be observed. The patient spent 230 (48%) days in depression (8 lithium samples obtained), 137 (29%) in mania (11 samples) and was euthymic on 68 (16%) days (2 samples). Mean lithium serum levels were 0.68mmol/l in depressive states, 0.37 mmol/l in manic states ( $p=.001$ , t-test). The lowest value was 0.13 mmol/l (in mania) and the highest 0.93 mmol/l (in depression).

**Conclusions:** In this patient mood-dependent changes of serum lithium levels during constant medication could be demonstrated. The reasons for this phenomenon are yet to be elucidated.