Lithium Monitoring

Before starting lithium: Obtain the following to assess for pre-existing conditions:

- Urinalysis
- BUN/creatinine
- TSH with reflexive free T4. Some suggest obtaining antithyroid peroxidase antibody titers as well.
- Calcium
- Pregnancy test for those with childbearing potential
- ECG for those with risk factors of coronary artery disease (diabetes, hypertension, dyslipidemia, cigarette smoking, etc.)

If any of the above indicate underlying pathology, consultation with a relevant specialist, if available, may be indicated before starting lithium treatment.

After starting lithium:

Lithium levels: Target level is between 0.8 and 1.2 mmol/L. Some patients who can't tolerate 0.8 due to side effects can be maintained on 0.6. Levels should not exceed 1.2 given risk of lithium toxicity.

When to check level:

- 5 to 7 days after starting and 5 to 7 days after dose changes while titrating.
- Before increasing the dose if there is no level from the previous two weeks
- Every 6 to 12 months for patients on a stable dose

How to check level: goal is to obtain a 12-hour serum trough. Checking levels in the morning before the first dose can be a convenient way to do this.

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Renal function:

- Check urinalysis, BUN/creatinine every 2-3 months during the first 6 months of therapy, and every 6 to 12 months thereafter

Thyroid function:

- Routine physical exam of thyroid as part of regular medical care.
- Monitor TSH/reflexive T4 1-2 times during the first 6 months, then every 6-12 months thereafter.

Parathyroid function:

- Monitor serum calcium yearly

Jefferson JW. A clinician's guide to monitoring kidney function in lithium-treated patients. J Clin Psychiatry 2010; 71:1153.
Ng F, Mammen OK, Wilting I, et al. The International Society for Bipolar Disorders (ISBD) consensus guidelines for the safety monitoring of bipolar disorder treatments. Bipolar Disord 2009; 11:559.

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