

LITHIUM CARBONATE tab:

Class: Antimanic Agent

Indications: Management of bipolar disorders; treatment of mania in individuals with bipolar disorder (maintenance treatment prevents or diminishes intensity of subsequent episodes), Potential augmenting agent for antidepressants; aggression, post-traumatic stress disorder, conduct disorder in children

Available dosage form in the hospital: 400MG TAB

Trade Names:

Dosage:

Note: Monitor serum concentrations and clinical response (efficacy and toxicity) to determine proper dose. Each 5 mL of lithium citrate oral solution contains 8 mEq of lithium ion, equivalent to the amount of lithium in 300 mg of lithium carbonate immediate release capsules/tablets.

Bipolar disorders: Oral: 900-2400 mg/day in 3-4 divided doses or 900-1800 mg/day in two divided doses of extended release

Geriatric

Bipolar disorders: Oral: Initial: 300 mg twice daily; increase weekly in increments of 300 mg/day, monitoring levels; rarely need >900-1200 mg/day.

Renal Impairment:

-Cl_{cr} 10-50 mL/minute: Administer 50% to 75% of normal dose.

-Cl_{cr} <10 mL/minute: Administer 25% to 50% of normal dose.

-Dialyzable (50% to 100%); 4-7 times more efficient than peritoneal dialysis

Hepatic Impairment:

No dosage adjustment provided in manufacturer's labeling.

Reference Range

Levels should be obtained twice weekly until both patient's clinical status and levels are stable then levels may be obtained every 1-3 months

Timing of serum samples: Draw trough just before next dose (8-12 hours after previous dose)

Therapeutic levels:

-Acute mania: 0.6-1.2 mEq/L (SI: 0.6-1.2 mmol/L)

-Protection against future episodes in most patients with bipolar disorder: 0.8-1 mEq/L (SI: 0.8-1.0 mmol/L); a higher rate of relapse is described in subjects who are maintained at <0.4 mEq/L (SI: 0.4 mmol/L)

-Elderly patients can usually be maintained at lower end of therapeutic range (0.6-0.8 mEq/L)

-Toxic concentration: >1.5 mEq/L (SI: >1.5 mmol/L)

Adverse effect levels:

GI complaints/tremor: 1.5-2 mEq/L

Confusion/somnolence: 2-2.5 mEq/L

Seizures/death: >2.5 mEq/L

Common side effect:

Cardiovascular: Cardiac arrhythmia, hypotension, sinus node dysfunction, flattened or inverted T waves (reversible), edema, bradycardia, syncope

Central nervous system: Blackout spells, coma, confusion, dizziness, dystonia, fatigue, headache, lethargy, pseudotumor cerebri, psychomotor retardation, restlessness, sedation, seizure, slowed intellectual functioning, slurred speech, stupor, tics, vertigo

Dermatologic: Dry or thinning of hair, folliculitis, alopecia, exacerbation of psoriasis, rash

Endocrine & metabolic: Euthyroid goiter and/or hypothyroidism, hyperthyroidism, hyperglycemia, diabetes insipidus

Gastrointestinal: Polydipsia, anorexia, nausea, vomiting, diarrhea, xerostomia, metallic taste, weight gain, salivary gland swelling, excessive salivation

Genitourinary: Incontinence, polyuria, glycosuria, oliguria, albuminuria

Hematologic: Leukocytosis

Neuromuscular & skeletal: Tremor, muscle hyperirritability, ataxia, choreoathetoid movements, hyperactive deep tendon reflexes, myasthenia gravis (rare)

Ocular: Nystagmus, blurred vision, transient scotoma

Miscellaneous: Coldness and painful discoloration of fingers and toes

Postmarketing and/or case reports: Drug-induced Brugada syndrome

Contraindications

Pregnancy Risk Factor: D