1.3.1.1.1 PROFESSIONAL INFORMATION FOR MEDICINES FOR HUMAN USE

SCHEDULING STATUS

S5

1. NAME OF THE MEDICINE

CAMCOLIT 250 mg film-coated tablets

CAMCOLIT 400 mg film-coated tablets

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each film-coated tablet of CAMCOLIT 250 contains 250 mg lithium carbonate.

Each film-coated tablet of CAMCOLIT 400 contains 400 mg lithium carbonate

Sugar free

For full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Film-coated tablets

CAMCOLIT 250 is a white, film-coated convex tablet, engraved “Camcolit” around one face of the tablet and a breakline on the reverse.

CAMCOLIT 400 is a white, film-coated convex tablet, with a breakline on one side and “Camcolit S ” engraved on the other side.

The score line is only to facilitate breaking for ease of swallowing and not to divide into equal doses.

4. CLINICAL PARTICULARS

4.1. Therapeutic indications

CAMCOLIT is indicated for:

- the treatment and prevention of relapse of mania and manic-depressive illness.

4.2. Posology and method of administration

Posology

Adults

Treatment of acute mania

The required daily dosage may be administered at the discretion of the clinician, either in divided doses or as a single daily dose. Treatment of mania should be initiated in hospital where regular monitoring of plasma lithium levels can be conducted.

The dosage of CAMCOLIT should be adjusted to produce a plasma lithium level between 0,6 and 1,0 mmol/l and regular estimations must be carried out to ensure maintenance of levels within the therapeutic range. For consistent results it is essential that the blood samples for plasma lithium estimations are taken 12 hours after the last dose of CAMCOLIT.

Details of Initial Dosing

1 000 mg to 1 500 mg of CAMCOLIT is administered daily for the first five or seven days. A blood sample for plasma lithium estimation is taken 12 hours after the last dose on the fifth or seventh day and the dosage of CAMCOLIT is adjusted to keep the plasma lithium level within the therapeutic range.

Subsequently, regular plasma lithium estimations must be carried out and, where necessary, the dosage of CAMCOLIT adjusted accordingly.

The precise initial dose of CAMCOLIT should be decided in the light of age and mass of the patient. Young patients often require a dose higher than average and older patients require a lower dose.

A lithium clearance test is carried out and the initial dosage calculated from the results. Even when the initial dosage is calculated in this way, it is still desirable that plasma lithium levels should be determined at weekly intervals during the first three weeks of treatment, and any necessary adjustments to dosage of CAMCOLIT made as a result of the levels actually obtained.

Most of the above applies to the treatment of hypomania as well as mania, but the patient (if not too ill) can be started on treatment as an out-patient provided that facilities for periodic plasma lithium monitoring are available and assays are initiated within 1 week.

Special populations

Elderly population

Dosage is as for prophylaxis above, but 12-hour lithium levels should be kept in the range of 0,4 to 0,7 mmol/l, as toxic symptoms are likely with plasma concentrations above 1,0 mmol/l.

Paediatric population

The use of CAMCOLIT in children is not recommended.

Method of administration

For oral administration.

4.3. Contraindications

CAMCOLIT is contraindicated in:

- Patients with hypersensitivity to lithium carbonate or to any excipients in CAMCOLIT (see section 6.1).
- Patients with renal disease, cardiac disease, or Addison's disease.
- Patients with renal or cardiac failure, evidence of brain damage or a low sodium intake.
- Pregnancy and breastfeeding (see section 4.6.).
- Patients with congenital long QT syndrome.
- Concomitant use of medicines known to prolong QT interval.

4.4. Special warnings and precautions for use

Lithium toxicity

CAMCOLIT toxicity is closely related to plasma lithium levels and can occur at doses close to therapeutic levels.

Lithium carbonate, as in CAMCOLIT, has a narrow therapeutic window. The dose required for treatment must be titrated and adjusted on the basis of regular monitoring of serum concentration of lithium. Lithium therapy should not be initiated unless adequate facilities for routine monitoring of accurate plasma lithium concentrations are available.

The ability to tolerate CAMCOLIT is considerably increased during the acute manic phase and decreases markedly when manic symptoms subside.

Elderly patients are particularly liable to lithium toxicity. Use with care as lithium excretion may also be reduced. They may also exhibit adverse reactions at serum levels ordinarily tolerated by younger patients.

Before beginning CAMCOLIT treatment

- It is important to ensure that renal function is evaluated.
- Thyroid function should be evaluated. Patients should be euthyroid before CAMCOLIT therapy is started.
- Cardiac function should be assessed especially in patients with cardiovascular disease.

Renal, cardiac and thyroid functions should be re-assessed periodically.

Risk of convulsions

The risk of convulsions may be increased when lithium is co-administered with drugs that lower the epileptic threshold, or in epileptic patients (see sections 4.5 and 4.8).

Benign intracranial hypertension

There have been case reports of benign intracranial hypertension (see section 4.8). Patients should be warned to report persistent headache and/or visual disturbances.

QT prolongation

As a precautionary measure, lithium, as in CAMCOLIT, should be avoided in patients with congenital long QT syndrome, and in patients concomitantly treated with drugs that are known to prolong the QT interval (see sections 4.3, 4.5 and 4.8). Caution should be exercised in patients with risk factors for QT interval prolongation (which include cardiac disease, bradycardia, thyroid disease, hypokalaemia, hypomagnesaemia, hypocalcaemia, female sex and advanced age).

Brugada syndrome

Lithium may unmask or aggravate Brugada syndrome, a hereditary disease of the cardiac sodium channel with characteristic ECG changes (right bundle branch block and ST segment elevation in right precordial leads), which may lead to cardiac arrest or sudden death. Lithium should not be administered to patients with Brugada syndrome or a family history of Brugada syndrome. Caution is advised in patients with a family history of cardiac arrest or sudden death.

Concomitant administration of antipsychotics

Concomitant administration of antipsychotics should be avoided.

Bariatric surgery

A lower maintenance dosage of CAMCOLIT may be required for patients, who have undergone a bariatric surgery because of decreased glomerular filtration following marked weight loss. Also, drug levels should be monitored closely in connection with bariatric surgery due to the risk of lithium toxicity.

Monitoring of blood lithium levels

Plasma lithium levels above 3,0 mmol/l may produce a complex clinical picture, involving multiple organs and organ systems. Plasma lithium levels should not be permitted to exceed 2,0 mmol/l during the acute treatment phase or 1,5 mmol/l during maintenance therapy.

In all cases plasma lithium levels should be determined frequently and even when consistent levels have been achieved in prophylaxis, should be monitored at least every 10 weeks.

Plasma concentration of lithium should be measured on a sample taken just prior to the time when a dose of lithium, as in CAMCOLIT, is due to be taken (i.e. at trough level 12 hours following the last dose).

Toxic effects may be expected at serum-lithium concentrations of about 1.5 mmol/litre, although they can appear at lower concentrations. They call for immediate withdrawal of treatment and should always be considered very seriously.

Plasma concentration of lithium should be measured every 5 to 7 days from initiation until stabilisation is achieved and at regular intervals for the duration of treatment.

Plasma lithium concentrations should be monitored more frequently (revert to weekly monitoring) in the following circumstances:

- Dosage alteration or change of lithium formulation (bioavailability may differ)
- Significant intercurrent disease
- Intercurrent infection
- Significant change in sodium intake
- Significant change in fluid intake
- Treatment with drugs altering renal clearance of lithium
- Treatment with drugs likely to upset electrolyte balance.

Renal impairment

Lithium excretion is reduced in the presence of renal impairment. This increases the risk of toxicity. Lithium, as in CAMCOLIT, is contra-indicated in patients with severe renal impairment (see section 4.3). If patients with mild or moderate renal impairment are being treated with CAMCOLIT, serum levels should be closely monitored. Renal function should be monitored in patients with renal impairment, and in patients with polyuria and polydipsia.

Long term treatment with CAMCOLIT may result in permanent changes in the kidney and impairment of renal function. High serum concentrations of CAMCOLIT, including episodes of acute CAMCOLIT toxicity may enhance these changes. The minimum clinically effective dose of CAMCOLIT should always be used. Patients should only be maintained on CAMCOLIT after 3 to 5 years if, on assessment, benefit persists.

Thyroid function impairment

Since CAMCOLIT can impair thyroid function, it is desirable in patients being treated prophylactically that some screening test of thyroid function, such as the protein-bound iodine test, be carried out at about three-monthly intervals. Many of the initial symptoms of hypothyroidism are similar to symptoms seen in depression, and hence it is difficult to differentiate except by some such screening of thyroid function. Thyrotoxicosis has also been reported.

The physician should be alert for possible thyroid involvement. Diffuse non-toxic goitre has been reported in a small number of patients on maintenance therapy with CAMCOLIT and in one baby born to a lithium treated mother.

Sodium levels

CAMCOLIT decreases sodium re-absorption by the renal tubules, which could lead to sodium depletion. Therefore, it is essential for the patient to maintain a normal diet, including salt, and an adequate fluid intake (2 500 to 3 000 ml) at least during the initial stabilisation period.

When sodium intake is lowered, CAMCOLIT excretion is slower and severe intoxication may ensue. Thus, CAMCOLIT should not be given to patients on a salt-free diet. In pregnancy, concomitant use of natriuretics (diuretics) and low-sodium diets is the most common cause of maternal and neonatal CAMCOLIT intoxication (see section 4.3).

Decreased tolerance to CAMCOLIT has been reported to ensue from protracted sweating or diarrhoea, and if such occur, supplemental fluid and salt should be administered.

Surgery

CAMCOLIT should be stopped 24 hours before major surgery, but the normal dose can be continued for minor surgery if fluids and electrolytes are carefully monitored.

Other

- ACE-inhibitors and ARB's may raise serum lithium levels in some patients, especially the elderly or patients with renal impairment (see section 4.5).
- Symptoms of nephrogenic diabetes insipidus are particularly prevalent in patients receiving concurrent treatment with tricyclic anti-depressants (see section 4.5).
- Lower doses of CAMCOLIT may be required with diuretic therapy as lithium clearance is reduced.
- Raised plasma levels of antidiuretic hormone (ADH) may occur during treatment.

- Serum lithium concentrations may increase during concomitant therapy with non-steroidal anti-inflammatory drugs (NSAIDs) possibly resulting in lithium toxicity. Serum lithium concentrations therefore should be monitored more frequently if a NSAID is initiated or discontinued.

Warnings to be given to patients about signs and symptoms of toxicity

Clear instructions regarding the symptoms of impending toxicity should be given by the doctor to all patients receiving long-term lithium therapy (see section 4.9) and advice given regarding the need for urgency in seeking medical assistance if these symptoms appear.

Patients should also be warned to report if polyuria or polydipsia develops. Episodes of nausea and vomiting or other conditions leading to salt/water depletion (including severe dieting) should also be reported. Patients should be advised to maintain their usual salt and fluid intake.

Renal tumours: cases of microcysts, oncocytomas and collecting duct renal carcinoma have been reported in patients with severe renal impairment who received lithium, as in CAMCOLIT, for more than 10 years (see section 4.8).

Excipients

This medicine contains less than 1 mmol sodium (23 mg) per tablet, that is to say essentially 'sodium-free'.

4.5. Interaction with other medicines and other forms of interaction

Interactions may occur as a result of increased or decreased lithium levels, or may act through other mechanisms, the most important being neurotoxicity which may occur at therapeutic levels when other medicines which act centrally on the CNS are taken concurrently.

Interactions which increase lithium concentrations

Co-administration of the following medicines with lithium, as in CAMCOLIT, may lead to increased lithium concentrations and a risk of toxicity:

- Any medicines which may cause renal impairment has the potential to cause lithium levels to rise, thereby causing toxicity. If the use of the medicine is unavoidable, carefully monitor lithium blood level and adapt dosage as necessary.
- Antibiotics (metronidazole, tetracyclines, co-trimoxazole, trimethoprim). Toxic symptoms may also occur at low or normal levels when used in conjunction with co-trimoxazole or trimethoprim. Lithium toxicity has been reported on isolated occasions in patients receiving spectinomycin. Metronidazole impairs renal elimination of CAMCOLIT and increases serum lithium concentrations, causing toxicity.
- Serum lithium concentrations may increase during concomitant therapy with non-steroidal anti-inflammatory drugs (NSAIDs) (including selective cyclooxygenase (COX) II inhibitors), possibly resulting in lithium toxicity. Serum lithium concentrations therefore should be monitored more frequently if NSAID therapy is initiated or discontinued.
- ACE-inhibitors and ARB's (Angiotensin Receptor Blockers) may raise serum lithium levels of CAMCOLIT, especially in the elderly or patients with renal impairment.
- Diuretics (including herbal preparations). In addition to the effects noted above, thiazide diuretics show a paradoxical antidiuretic effect resulting in possible water retention and lithium intoxication. Loop diuretics (furosemide and bumetanide, and etacrynic acid) seem less likely to cause lithium retention, although caution is warranted. Lower doses of CAMCOLIT may be required with diuretic therapy as lithium clearance is reduced.
- Other drugs affecting electrolyte balance, e.g. steroids, may alter lithium excretion and should therefore be avoided.

- Topiramate.

Interactions which decrease serum lithium concentrations:

Co-administration of the following drugs with lithium may lead to decreased lithium concentrations and a risk of loss of efficacy:

- Carbonic anhydrase inhibitors such as acetazolamide increase renal elimination of CAMCOLIT and lower serum levels.
- Caffeine and other xanthine derivatives (e.g. theophylline) can increase the renal excretion of CAMCOLIT and potentially reduce serum lithium levels.
- Sodium salts, particularly bicarbonate and chloride, may also reduce stable serum lithium concentrations by increasing renal excretion. Dietary changes that markedly change salt intake should be avoided.
- Urea.
- empagliflozin.
- dapagliflozin

Interactions which may not be associated with increased or reduced lithium levels:

Concomitant use of the following drugs may precipitate symptoms of toxicity when the lithium level is within the normal range:

- Carbamazepine, clonazepam and possibly phenytoin may cause neurotoxicity without a change in serum lithium levels.
- Methyldopa can increase CAMCOLIT toxicity without any change in serum lithium levels.

- Combination of CAMCOLIT with other anti-psychotics including the atypical antipsychotics olanzapine, clozapine and haloperidol at high doses, may increase the risk of side effects, particularly extra-pyramidal symptoms.
- Tricyclic and tetracyclic antidepressants. Symptoms of nephrogenic diabetes insipidus are particularly prevalent in patients receiving concurrent treatment with tricyclic antidepressants.
- Calcium channel blockers - Diltiazem or verapamil may cause unpredictable neurotoxic side effects at therapeutic levels, and potential for bradycardia without change in serum lithium concentration.
- Neuromuscular blocking agents - Lithium may cause neurotoxic reactions at therapeutic lithium levels. prolong the effects of neuromuscular blocking agents.
- Selective serotonin re-uptake inhibitors (SSRIs): Concurrent use with lithium may precipitate a serotonergic syndrome.
- Non-steroidal anti-inflammatory drugs including COX II inhibitors: monitor serum lithium concentrations more frequently if NSAID therapy is initiated or discontinued
- Triptans: lithium toxicity reported suggestive of serotonin syndrome.

Medicines which lower seizure threshold

Caution is advised if lithium is co-administered with medicines that lower the epileptic threshold (see section 4.4). e.g. antidepressants, antipsychotics, anaesthetics and theophylline.

Medicines which prolong the QT interval

Lithium can cause an increase in the QTc interval, particularly at higher blood levels. Therefore, concurrent use of medicines which have a risk of prolonging the QTc interval should be avoided (see section 4.4), and consideration be made of other potential risk factors such as increasing age, female sex, congenital long QT syndrome, cardiac and thyroid disease and the following metabolic disturbances: hypocalcaemia, hypokalaemia, hypomagnesaemia.

The following products have a high risk of causing QT prolongation and torsade de pointes:

- Class Ia antiarrhythmics, (ajmaline, cibenzoline, disopyramide, hydroquinidine, procainamide, quinidine),
- Class III antiarrhythmics (amiodarone, azimilide, cibenzoline, dofetilidem, ibutilide, sotalol),
- Antipsychotics (amisulpride, haloperidol, droperidol, mesoridazine, pimozide, sertindole, thioridazine and clozaril),
- Antibiotics (intravenous erythromycin, sparfloxacin),
- Serotonin antagonists (ketanserin, dolasetron mesylate),
- Antihistamines (astemizole, terfenadine),
- Antimalarials (artemisinin derivatives, mefloquine, halofantrine),
- Other: arsenic trioxide, cisapride and ranolazine.

ECG should be performed after initiation of treatment and at any point where the patient becomes symptomatic or when there are changes in disease or treatment which may increase the risk of interaction or arrhythmia.

Other Interactions:

- Low sodium diet. Rapid reduction of sodium intake may cause raised lithium levels.
- Intercurrent illness may cause lithium toxicity

Combination of CAMCOLIT with antidepressants such as SSRI's (Selective Serotonin Reuptake Inhibitors) and tricyclic antidepressant agents may increase the risk of side effects.

4.6. Fertility, pregnancy and lactation

The use of CAMCOLIT is contraindicated in pregnancy and lactation (see section 4.3).

Women of childbearing potential / Contraception in males and females

It is advisable that women treated with lithium, as in CAMCOLIT should adopt adequate contraceptive methods. In case of a planned pregnancy, it is strongly recommended to discontinue lithium therapy.

Pregnancy

There is epidemiological evidence to suggest that CAMCOLIT is harmful during pregnancy. Lithium crosses the placental barrier, and can be harmful to the foetus.

An increase in cardiac and other abnormalities, especially Ebstein anomaly, are reported. Therefore, a pre-natal diagnosis such as ultrasound and electrocardiogram examination is strongly recommended.

Neonates may show signs of lithium toxicity necessitating fluid therapy in the neonatal period. Neonates born with low serum lithium concentrations may have a flaccid appearance that returns to normal without any treatment.

Breastfeeding

CAMCOLIT should not be used in pregnancy and lactation (see section 4.3). Infants of mothers on CAMCOLIT should be bottle fed, as lithium is present in the breast milk.

Fertility

Studies in animals have shown adverse effects on male fertility.

4.7. Effects on ability to drive and use machines

CAMCOLIT has a minor to moderate influence on the ability to drive or operate machinery.

As lithium may cause disturbances of the central nervous system, patients should be warned of the possible hazards when driving or operating machinery.

4.8. Undesirable effects

a) Summary of the safety profile

Adverse reactions are seldom encountered at plasma lithium levels below 1,0 mmol/l except in the occasional patient unusually sensitive to CAMCOLIT. Mild to moderate toxic reactions may occur at levels from 1,5 to 2,5 mmol/l, and moderate to severe reactions may occur at levels from 2,0 to 2,5 mmol/l depending upon the individual response to CAMCOLIT.

Patients on therapeutic doses of CAMCOLIT may complain of fatigue and muscular weakness. Fine hand tremor, slurred speech, polyuria, and polydipsia may occur during initial therapy for the acute manic phase, and may persist throughout treatment.

Transient and mild nausea and general discomfort may also appear during the first few days of CAMCOLIT administration. Toxic signs are rarely seen in patients stabilised on maintenance doses.

Diarrhoea, vomiting, drowsiness, muscular weakness and lack of co-ordination may be early signs of CAMCOLIT intoxication, and can occur at lithium levels below 2,0 mmol/l. At higher levels, ataxia, giddiness, tinnitus, blurred vision and a large output of dilute urine may be seen.

While most side effects are more common during the first week or two of treatment and usually disappear when the dose is reduced, thirst, excessive urination and tremor may persist.

b) Tabulated list of adverse reactions

The following adverse reactions have been reported and appear to be related to the plasma lithium levels:

System organ class	**Frequent**	**Less frequent**	**Frequency unknown** (cannot be estimated from the available data)
Immune system disorders			Increase in antinuclear antibodies
Blood and the lymphatic system disorders		Leukocytosis	
Endocrine disorders		Hypothyroidism, hyperthyroidism	Goitre formation, thyrotoxicosis, hyperparathyroidism, parathyroid adenoma, lowering of the PBI (plasma protein-bound iodine), increased I^{131} intake, parathyroid hyperplasia
Metabolism and nutrition disorders	Weight gain, hypercalcaemia		Transient hyperglycaemia, hypermagnesaemia, anorexia
Psychiatric disorders			Delirium
Nervous system disorders	Fine hand tremor	Syncope (blackout spells), stupor, confusion, slurred speech, dizziness, nystagmus	EEG Changes: Diffuse slowing, widening of the frequency spectrum, potentiation and disorganisation of background rhythm. A dazed feeling may occur but disappears

			after stabilisation, epileptiform seizures, vertigo, muscular rigidity, incontinence of urine and faeces, somnolence, psychomotor retardation, restlessness, myasthenia gravis, coma, benign intracranial hypertension, syndrome of irreversible lithium effectuated neurotoxicity (SILENT), encephalopathy, neuroleptic malignant syndrome, serotonin syndrome, parkinsonism, extrapyramidal symptoms, ataxia, memory impairment, mild cognitive impairment may occur during long term use, giddiness, hyperactive deep tendon reflexes
Eye disorders		Blurred vision Exophthalmos Transient scotoma (blind spot)	
Cardiac disorders		Cardiac dysrhythmia ECG changes: Reversible flattening, iso-electricity or inversion of T waves, sinus node dysfunction	Oedema, cardiac arrest, ventricular fibrillation, ventricular tachycardia, ventricular arrhythmias, Torsade de pointes, QT interval prolongation, cardiomyopathy, bradycardia, Brugada syndrome
Vascular disorders			Allergic vasculitis, hypotension, hypertension, peripheral circulatory collapse
Gastrointestinal disorders	Diarrhoea, nausea		Vomiting, dry mouth, excessive salivation, gastritis, Lithium salts have been implicated in dysgeusia

Skin and subcutaneous tissue disorders		Occurrence or exacerbation of acne	Thinning of hair, alopecia, occurrence or exacerbation of psoriasis, pruritus, rash, lichenoid drug reaction, allergic rash, acneiform eruptions, papular skin disorder, folliculitis, drug reaction with eosinophilia and systemic symptoms (DRESS)
Musculoskeletal and connective tissue disorders		Muscle hyperirritability, twitching, muscle weakness, choreoathetotic movements, muscular rigidity	rhabdomyolysis
Renal and urinary disorders	Polydipsia	Acquired nephrogenic diabetes insipidus accompanied by excessive thirst, albuminuria	Polyuria, glycosuria, **m**icrocysts, oncocytoma and collecting duct renal carcinoma (in long-term therapy) (see Section 4.4). impairment of renal function, permanent changes in the kidney, nephrotic syndrome, histological renal changes with interstitial fibrosis after long term treatment
Reproductive system and breast disorders			Sexual dysfunction.
General disorders and administrative site conditions		Thirst, headache	Fatigue, lethargy, asthenia, sudden unexplained death, malaise

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicine is important. It allows continued monitoring of the benefit/risk balance of the medicine. Healthcare providers are requested to report any suspected adverse drug reactions to SAHPRA via the Med Safety APP (Medsafety X SAHPRA) and eReporting platform (who-umc.org) found on SAHPRA website.

Aspen Pharmacare:

E-mail: Drugsafety@aspenpharma.com

Tel: 0800 118 088 / +27 (0)11 239-6200

4.9. Overdose

Lithium carbonate has a narrow therapeutic window. Symptoms of lithium overdose (Lithium intoxication) can therefore occur due to intercurrent illness, iatrogenic causes, and self poisoning.

Any overdose in a patient who has been taking chronic lithium therapy should be regarded as potentially serious.

Acute overdosage

A single acute overdose usually carries low risk and patients tend to show mild symptoms only, irrespective of their serum lithium concentration. However more severe symptoms may occur after a delay if lithium elimination is reduced because of renal impairment, particularly if a slow-release preparation has been taken. The fatal dose, in a single overdose, is probably over 5g.

Acute overdosage in patient on chronic lithium therapy

If an acute overdose has been taken by a patient on chronic lithium therapy, this can lead to serious toxicity occurring even after a modest overdose as the extravascular tissues are already saturated with lithium.

In patients with a raised lithium concentration, the risk of toxicity is greater in those with the following underlying medical conditions: hypertension; diabetes; congestive heart failure; chronic renal failure; schizophrenia; Addison's disease.

Symptoms

The onset of symptoms may be delayed, with peak effects not occurring for as long as 24 hours, especially in patients who are not receiving chronic lithium therapy or following the use of a sustained release preparation.

Symptoms of early toxicity include vomiting, diarrhoea, nausea, abdominal pain, coarse tremor of the hands, loss of co-ordination, muscle weakness, muscle hyperirritability, choreoathetoid movements, confusion, drowsiness, dysarthria, loss of appetite, anorexia, ataxia, giddiness, tinnitus, blurred vision, urinary or faecal incontinence, light headedness, blackouts, fasciculation and increased deep tendon reflexes, myoclonic twitches and jerks, increasing restlessness followed by stupor, and hypernatraemia.

Symptoms of severe CAMCOLIT toxicity include hyperreflexia, attacks of hyperextension of the limbs, myoclonus, severe trembling**,** epileptic seizures, speech disturbances, metallic taste, toxic psychosis, syncope, polyuria, electrolyte imbalance, dehydration, renal and/or circulatory failure, hypotension or rarely hypertension, coma, convulsions, cerebellar signs, cardiac dysrhythmias including sino-atrial block, sinus and junctional bradycardia and first-degree heart block, circulatory collapse and renal failure. Deaths have been reported.

Treatment

There is no known antidote to lithium poisoning.

In these cases, withdrawal of the drug and conservative treatment is indicated. Lithium levels should be estimated every 6 hours. Special attention must be given to the maintenance of fluid and electrolyte balance, and also adequate renal function.

Forced diuresis or diuretics should not be used in any circumstances. Appropriate supportive care may include measures to control hypotension and convulsions.

All patients should be observed for a minimum of 24 hours. ECG should be monitored in symptomatic patients. Steps should be taken to correct hypotension.

If the serum lithium level is above 4,0 mmol/l, or if there is deterioration in the patient's condition, or if the serum lithium concentration is not falling at a rate equivalent to a half-life of less than 30 hours, peritoneal dialysis or haemodialysis should be instituted promptly. This should be continued until the serum and dialysis fluid are free of lithium. Serum lithium levels should be monitored for at least another 7 days thereafter, as a rebound rise is possible due to delayed diffusion from the tissues. Haemodialysis is the treatment of choice for severe poisoning and should be considered in all patients with marked neurological features. It is the most efficient method of lowering lithium concentrations rapidly but substantial rebound increases can be expected when dialysis is stopped, and prolonged, or repeated treatments may be required.

It should be considered also in acute, acute on chronic or chronic overdose in patients with severe symptoms regardless of serum lithium concentration.
Note: Clinical improvement generally takes longer than reduction of serum lithium concentrations regardless of the method used.

If haemodialysis facilities are not available, peritoneal dialysis is secondary in choice, but may be used.

5. PHARMACOLOGICAL PROPERTIES

5.1. Pharmacodynamic properties

Category and Class: A 1.2 Central Nervous System Stimulants

Pharmacotherapeutic group: Psychoanaleptics or Antidepressants

ATC code: N05AN01

Mechanism of action

Investigations into the action of lithium are hampered by the lack of agreement of the aetiology of affective disorders. Three main mechanisms have been proposed:

1. Lithium interferes with the active transport of cations across nerve cell membranes.
2. It reduces the activity of non-adrenergic neurones in the brain.
3. It influences the balance and distribution of electrolytes and water in the various body compartments.

5.2. Pharmacokinetic properties

Distribution

The distribution space of lithium approximates that of total body water.

Elimination

Lithium is primarily excreted in urine, with insignificant excretion in faeces.

Renal clearance of lithium is proportional to its plasma concentration.

6. PHARMACEUTICAL PARTICULARS

6.1. List of excipients

CAMCOLIT 250

Hydroxypropyl methyl cellulose (hypromellose), macrogol 400, magnesium stearate, maize starch, pregelatinized maize starch.

CAMCOLIT 400

Acacia, hydroxypropyl methyl cellulose (hypromellose), macrogol 400, magnesium stearate, maize starch, methylated ethyl alcohol, sodium laurilsulfate, titanium dioxide.

6.2. Incompatibilities

Not applicable.

6.3. Shelf life

24 months.

6.4. Special precautions for storage

Store in a cool, dry place, at or below 25 °C.

Keep in original packaging until required for use.

6.5. Nature and contents of container

CAMCOLIT 250:

100 and 1 000 tablets are packed in a snap secure white polypropylene container, with a snap secure white polyethylene cap and a white polyethylene Jayfilla wad.

100 tablets are packed in a white polypropylene securitainer with a white LLDPE closure.

CAMCOLIT 400:

100 and 500 tablets are packed in a snap secure white polypropylene container, with a snap secure white polyethylene cap and a white polyethylene Jayfilla wad.

100 tablets are packed in a white polypropylene securitainer with a white LLDPE closure.

Not all packs or pack sizes may be marketed.

6.6. Special precautions for disposal and other handling

No special requirements.

7. HOLDER OF CERTIFICATE OF REGISTRATION

PHARMACARE LIMITED

Healthcare Park

Woodlands Drive

Woodmead 2191

0800 122 912 / +27 (0)11 239 6200

8. REGISTRATION NUMBERS

CAMCOLIT 250: B1260 (Act 101/1965)

CAMCOLIT 400: L/1.2/0161

9. DATE OF FIRST AUTHORISATION

CAMCOLIT 250: Old Medicine

CAMCOLIT 400: 09 August 1982

10. DATE OF REVISION OF TEXT

25 August 2025

Die Afrikaanse Professionele Inligting is op versoek beskikbaar. Mediese Blitslyn: 0800 118 088.

Botswana:	S2
Camcolit 250:	BOT1001689
Camcolit 400:	BOT1001690

Namibia:	NS3
Camcolit 250:	05/1.2/0440
Camcolit 400:	90/1.2/00671

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