

HANBET CHLORPROMAZINE INJECTION

This information is intended for use by health professionals

1. Name of the medicinal product

Chlorpromazine Injection, 50mg/2mL

2. Qualitative and quantitative composition

Each ampoule contains Chlorpromazine Hydrochloride 50.00 mg

3. Pharmaceutical form

Solution for injection

4. Clinical particulars

4.1 Therapeutic indications

Schizophrenia and other psychoses (especially where paranoia is a predominant symptom), mania and hypomania. In anxiety, psychomotor agitation, excitement, violent or dangerously impulsive behaviour. Chlorpromazine may be used as an adjunct in the short-term management of these conditions.

Intractable hiccup.

Nausea and vomiting in terminal illness (where other drugs have failed or are not available).

Induction of hypothermia is facilitated by Chlorpromazine which prevents shivering and causes vasodilatation.

Childhood schizophrenia and autism.

4.2 Posology and method of administration

Adults

Adjust dosage to individual and the severity of his condition, recognizing that the milligram for milligram potency relationship among all dosage forms has not been precisely established clinically. It is important to increase dosage until symptoms are controlled. Dosage should be increased more gradually in debilitated or emaciated patients. In continued therapy, gradually reduce dosage to the lowest effective maintenance level, after symptoms have been controlled for a reasonable period.

Increase parenteral dosage only if hypotension has not occurred. Before using IM, see **Important Notes On Injection**.

ELDERLY PATIENTS

In general, dosages in the lower range are sufficient for most elderly patients. Since they appear to be more susceptible to hypotension and neuromuscular reactions, such patients should be observed closely. Dosage should be tailored to the individual, response carefully monitored, and dosage adjusted accordingly. Dosage should be increased more gradually in elderly patients.

PSYCHOTIC DISORDERS

Increase dosage gradually until symptoms are controlled. Maximum improvement may not be seen for weeks or even months. Continue optimum dosage for 2 weeks; then gradually reduce dosage to the lowest effective maintenance level. Daily dosage of 200 mg is not unusual. Some patients require higher dosages (e.g., 800 mg daily is not uncommon in discharged mental patients).

Hospitalized Patients: Acute Schizophrenic or Manic States

IM: 25 mg (1 mL). If necessary, give additional 25 to 50 mg injection in 1 hour. Increase subsequent IM doses gradually over several days—up to 400 mg q4-6h in exceptionally severe cases—until patient is controlled. Usually the patient becomes quiet and cooperative within 24 to 48 hours and oral doses may be substituted.

Prompt Control of Severe Symptoms

IM: 25 mg (1 mL). If necessary, repeat in 1 hour. Subsequent doses should be oral, 25-50 mg tid.

NAUSEA AND VOMITING

IM: 25 mg (1 mL). If no hypotension occurs, give 25 to 50 mg q3-4h prn, until vomiting stops. Then switch to oral dosage.

During Surgery

IM: 12.5 mg (0.5 mL). Repeat in 1/2 hour if necessary and if no hypotension occurs. *IV*: 2 mg per fractional injection, at 2-minute intervals. Do not exceed 25 mg. Dilute to 1 mg/mL, i.e., 1 mL (25 mg) mixed with 24 mL of saline.

PRESURGICAL APPREHENSION

IM: 12.5 to 25 mg (0.5-1 mL), 1 to 2 hours before operation.

INTRACTABLE HICCUPS

If symptoms persist for 2-3 days after trial with oral therapy, give 25 to 50 mg (1-2 mL) *IM*. Should symptoms persist, use *slow IV* infusion with patient flat in bed: 25 to 50 mg (1-2 mL) in 500 to 1000 mL of saline. Follow blood pressure closely.

ACUTE INTERMITTENT PORPHYRIA

IM: 25 mg (1 mL) tid or qid until patient can take oral therapy.

TETANUS

IM: 25 to 50 mg (1-2 mL) given 3 or 4 times daily, usually in conjunction with barbiturates. Total doses and frequency of administration must be determined by the patient's response, starting with low doses and increasing gradually. *IV*: 25 to 50 mg (1-2 mL). Dilute to at least 1 mg per mL and administer at a rate of 1 mg per minute.

Pediatric Patients (6 months to 12 years of age)

Chlorpromazine should generally not be used in pediatric patients under 6 months of age except where potentially lifesaving. It should not be used in conditions for which specific pediatric dosages have not been established.

SEVERE BEHAVIORAL PROBLEMS

Outpatients

Select route of administration according to severity of patient's condition and increase dosage gradually as required. *IM*: 1/4 mg/lb body weight q6-8h, prn.

Hospitalized Patients

As with outpatients, start with low doses and increase dosage gradually. In severe behavior disorders, higher dosages (50-100 mg daily, and in older children, 200 mg daily or more) may be necessary. There is little evidence that behavior improvement in severely disturbed mentally retarded patients is further enhanced by doses beyond 500 mg per day. *Maximum IM Dosage*: Patients up to 5 years (or 50 lbs.), not over 40 mg/day; 5-12 years (or 50-100 lbs.), not over 75 mg/day except in unmanageable cases.

NAUSEA AND VOMITING

Dosage and frequency of administration should be adjusted according to the severity of the symptoms and response of the patient. The duration of activity following intramuscular administration may last up to 12 hours. Subsequent doses may be given by the same route if necessary. *IM*: 1/4 mg/lb body weight q6-8h, prn. *Maximum IM Dosage*: Pediatric patients 6 months to 5 years (or 50 lbs.), not over 40 mg/day; 5-12 years (or 50-100 lbs.), not over 75 mg/day except in severe cases.

During Surgery

IM: 1/8 mg/lb body weight. Repeat in 1/2 hour if necessary and if no hypotension occurs. *IV*: 1 mg per fractional injection at 2-minute intervals and not exceeding recommended *IM* dosage. Always dilute to 1 mg/mL, i.e., 1 mL (25 mg) mixed with 24 mL of saline.

PRESURGICAL APPREHENSION

1/4 mg/lb body weight *IM* 1 to 2 hours before operation.

TETANUS

IM or IV: 1/4 mg/lb body weight q6-8h. When given IV, dilute to at least 1 mg/mL and administer at a rate of 1 mg per 2 minutes. In patients up to 50 lbs., do not exceed 40 mg daily; 50 to 100 lbs., do not exceed 75 mg except in severe cases.

Important Notes on Injection

Inject slowly, deep into upper outer quadrant of buttock.

Because of possible hypotensive effects, reserve parenteral administration for bedfast patients or for acute ambulatory cases, and keep patient lying down for at least 1/2 hour after injection. If irritation is a problem, dilute injection with saline or 2% procaine; mixing with other agents in the syringe is not recommended. Subcutaneous injection is not advised. AVOID INJECTING UNDILUTED CHLORPROMAZINE HYDROCHLORIDE INJECTION INTO VEIN. IV ROUTE IS ONLY FOR SEVERE HICCUPS, SURGERY AND TETANUS.

Because of the possibility of contact dermatitis, avoid getting solution on hands or clothing.

Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration, whenever solution and container permit.

4.3 Contraindications

- Hypersensitivity to chlorpromazine or to any of the excipients listed in section 6.1
- Hypothyroidism
- Bone marrow depression
- Pheochromocytoma
- Myasthenia gravis
- Risk of angle-closure glaucoma
- Risk of urinary retention related to urethroprostatic disorders
- History of agranulocytosis
- Dopaminergic antiparkinsonism agents (see Section 4.5)
- Nursing mothers (see Section 4.6)
- Citalopram, escitalopram.

Patients with rare hereditary problems of galactose intolerance, the Lapp lactase deficiency or glucose-galactose malabsorption should not take this medicine

4.4 Special warnings and precautions for use

Blood Dyscrasias: All patients must be advised that, if they experience fever, sore throat or any other infection, they should inform their physician immediately and undergo a complete blood count. Treatment will be discontinued if any marked changes (hyperleucocytosis, granulocytopenia) are observed in the latter.

As agranulocytosis has been reported, regular monitoring of the complete blood count is recommended. The occurrence of unexplained infections or fever may be evidence of blood dyscrasia (see Section 4.8) and requires immediate haematological investigation.

Neuroleptic malignant syndrome: treatment must be interrupted in the event of unexplained hyperpyrexia since this can be one of the signs of neuroleptic malignant syndrome (pallor, hyperthermia, disorders of autonomic function, altered consciousness, muscle rigidity). Signs of autonomic instability, such as hyperhidrosis and irregular blood pressure, can precede the onset of hyperthermia and as such constitute

premonitory signs of the syndrome. While this neuroleptic-related effect can be of idiosyncratic origin, certain risk factors such as dehydration and brain damage would seem to indicate a predisposition.

Chlorpromazine should be avoided in patients with hypothyroidism, phaeochromocytoma, myasthenia gravis and prostate hypertrophy. It should be avoided in patients known to be hypersensitive to phenothiazines or with a history of narrow angle glaucoma or agranulocytosis.

Acute withdrawal symptoms, including nausea, vomiting and insomnia, have very rarely have been reported following the abrupt cessation of high doses of neuroleptics. Relapse may also occur, and the emergence of extrapyramidal reactions has been reported. Therefore, gradual withdrawal is advisable.

In schizophrenia, the response to neuroleptic treatment may be delayed. If treatment is withdrawn, the recurrence of symptoms may not become apparent for some time.

Neuroleptic phenothiazines may potentiate QT interval prolongation which increases the risk of onset of serious ventricular arrhythmias of the torsade de pointes type, which is potentially fatal (sudden death). QT prolongation is exacerbated, in particular, in the presence of bradycardia, hypokalaemia, and congenital or acquired (i.e. drug induced) QT prolongation. If the clinical situation permits, medical and laboratory evaluations should be performed to rule out possible risk factors before initiating treatment with a neuroleptic agent and as deemed necessary during treatment (see Section 4.8).

Where clinically possible, the absence of any factors favouring the onset of ventricular arrhythmias should be ensured before administration:

- bradycardia less than 55 beats per minute;
- hypokalaemia;
- hypocalcaemia;
- hypomagnesaemia;
- starvation;
- alcohol abuse;
- concomitant therapy with other drugs to prolong QT interval;
- congenital long QT interval;
- ongoing treatment with any drug which could induce marked bradycardia (<55 beats per minute), hypokalaemia, intracardiac conduction depression or QT prolongation (see Section 4.5).

With the exception of emergencies, it is recommended that the initial work up of patients receiving a neuroleptic should include an ECG.

Except under exceptional circumstances, this drug must not be administered to patients with Parkinson's disease.

The concomitant use of chlorpromazine with lithium, other QT prolongation agents, and dopaminergic antiparkinsonism agents is not recommended (see Section 4.5).

The onset of paralytic ileus, potentially indicated by abdominal bloating and pain, must be treated as an emergency (see section 4.8).

Cases of venous thromboembolism (VTE) sometimes fatal, have been reported with antipsychotic drugs. Since patients treated with anti-psychotics often present with acquired risk factors for VTE, all possible risk factors for VTE should be identified before and during treatment with Chlorpromazine and preventive measures undertaken.

Stroke: In randomised clinical trials versus placebo performed in a population of elderly patients with dementia and treated with certain atypical antipsychotic drugs, a 3-fold increase of the risk of cerebrovascular events has been observed. The mechanism of such risk increase is not known. An increase in the risk with other antipsychotic drugs or other populations of patient cannot be excluded. Chlorpromazine should be used with caution in patients with stroke risk factors.

Elderly Patients with Dementia: Elderly patients with dementia-related psychosis treated with antipsychotic drugs are at an increased risk of death. Analyses of seventeen placebo-controlled trials (modal duration of 10 weeks), largely in patients taking atypical antipsychotic drugs, revealed a risk of death in drug-treated patients of between 1.6 to 1.7 times the risk of death in placebo-treated patients. Over the course of a typical 10-week controlled trial, the rate of death in drug-treated patients was about 4.5% compared to a rate of about 2.6% in the placebo group. Although the cause of death in clinical trials with atypical antipsychotics were varied, most of the deaths appeared to be either cardiovascular (e.g., heart failure, sudden death) or infectious (e.g., pneumonia) in nature. Observational studies suggest that, similar to atypical antipsychotic drugs, treatment with conventional antipsychotic drugs may increase mortality. The extent to which the findings of increased mortality in observational studies may be attributed to the antipsychotic drug as opposed to some characteristic(s) of the patient is not clear.

As with all anti-psychotic drugs, Chlorpromazine should not be used alone where depression is predominant. However, it may be combined with antidepressant therapy to treat those conditions in which depression and psychosis coexist.

Chlorpromazine are not licensed for the treatment of dementia-related behavioural disturbances.

Because of the risk of photosensitisation, patients should be advised to avoid exposure to direct sunlight (see Section 4.8). In those frequently handling preparations of phenothiazines, the greatest care must be taken to avoid contact of the drug with the skin. Hyperglycaemia or intolerance to glucose has been reported in patients treated with Chlorpromazine. Patients with an established diagnosis of diabetes mellitus or with risk factors for the development of diabetes who are started on Chlorpromazine should get appropriate glycaemic monitoring during treatment (see Section 4.8).

- The following populations must be closely monitored after administration of chlorpromazine.
 - o epileptics, since chlorpromazine may lower the seizure threshold. Treatment must be discontinued if seizures occur.
 - o elderly patients presenting with heightened susceptibility to orthostatic hypotension, sedation and extrapyramidal effects; chronic constipation (risk of paralytic ileus), and potentially prostatic hypertrophy. It should be used with caution particularly during very hot or cold weather (risk of hyper-, hypothermia).
 - o patients presenting with certain forms of cardiovascular disease, since this class of drug has quinidine-like effects and can induce tachycardia and hypotension.
 - o patients with severe liver and/or renal failure because of the risk of accumulation.
- Patients on long-term treatment should receive regular ophthalmological and haematological examinations.

- Patients are strongly advised not to consume alcohol and alcohol-containing drugs throughout treatment (see Section 4.5).
- Chlorpromazine contain lactose. Patients with rare hereditary problems of galactose intolerance, total lactase deficiency or glucose-galactose malabsorption should not take this medicine.
- Since there is a potential to impact on cognitive function, children should undergo a yearly clinical examination to evaluate learning capacity. The dosage should be adjusted regularly as a function of the clinical status of the child.

4.5 Interaction with other medicinal products and other forms of interaction

Adrenaline must not be used in patients overdosed with Chlorpromazine.

Anticholinergic drugs may reduce the antipsychotic effect of Chlorpromazine and the mild anticholinergic effect of Chlorpromazine may be enhanced by other anticholinergic drugs possibly leading to constipation, heat stroke etc.

The action of some drugs may be opposed by Chlorpromazine; these include amphetamine, levodopa, clonidine, guanethidine and adrenaline.

Increases or decreases in the plasma concentrations of a number of drugs e.g. propranolol Phenobarbital have been observed but were not of clinical significance.

Simultaneous administration of deferoxamine and prochlorperazine has been observed to induce a transient metabolic encephalopathy characterised by loss of consciousness for 48-72 hours. It is possible this may occur with Chlorpromazine since it shares many of the pharmacological properties of prochlorperazine.

There is an increased risk of agranulocytosis when neuroleptics are used concurrently with drugs with myelosuppressive potential, such as carbamazepine or certain antibiotics and cytotoxics.

Combinations contraindicated

Dopaminergics (quinagolide, cabergoline), not including dopaminergic antiparkinsonism agents, are contraindicated (see Section 4.3): reciprocal antagonism of the dopaminergic agent and neuroleptic. Citalopram and escitalopram are contraindicated.

Combinations not recommended

Dopaminergic antiparkinsonism agents (amantadine, bromocriptine, cabergoline, levodopa, lisuride, pergolide, piribedil, ropinirole) are not recommended: reciprocal antagonism of the antiparkinsonism agent and neuroleptic (see Section 4.4). Neuroleptic-induced extrapyramidal syndrome should be treated with an anticholinergic rather than a dopaminergic antiparkinsonism agent (dopaminergic receptors blocked by neuroleptics).

Levodopa: reciprocal antagonism of levodopa and the neuroleptic. In Parkinson's patients, it is recommended to use the minimal doses of each drug.

QT prolonging drugs: there is an increased risk of arrhythmias when chlorpromazine is used with concomitant QT prolonging drugs (including certain antiarrhythmics and other antipsychotics including sultopride) and drugs causing electrolyte imbalance (see Section 4.4).

Alcohol: alcohol potentiates the sedative effect of neuroleptics. Changes in alertness can make it dangerous to drive or operate machinery. Alcoholic beverages and medication containing alcohol should be avoided (see Section 4.4).

Lithium (high doses of neuroleptics): concomitant use can cause confusional syndrome, hypertonia and hyperreflexivity, occasionally with a rapid increase in serum concentrations of lithium (see Section 4.4). There have been rare cases of neurotoxicity Lithium can interfere with the absorption of neuroleptic agents.

Combinations requiring precautions

Antidiabetic agents: concomitant administration of high chlorpromazine doses (100 mg/day), and antidiabetic agents can lead to an increase in blood sugar levels (decreased insulin release). Forewarn the patient and advise increased self-monitoring of blood and urine levels. If necessary, adjust the antidiabetic dosage during and after discontinuing neuroleptic treatment.

Topical gastrointestinal agents (magnesium, aluminium and calcium salts, oxides and hydroxides): decreased GI absorption of phenothiazine neuroleptics. Do not administer phenothiazine neuroleptics simultaneously with topical GI agents (administer more than 2 hours apart if possible).

CYP1A2 inhibitors

Administration of chlorpromazine with CYP1A2 inhibitors, in particular strong or moderate inhibitors may lead to an increase of chlorpromazine plasma concentrations. Therefore, patients may experience a chlorpromazine dose-dependent adverse drug reaction.

There is a possible pharmacokinetic interaction between inhibitors of CYP2D6, such as phenothiazines and CYP2D6 substrates.

Combinations to be taken into consideration

Antihypertensive agents: potentiation of the antihypertensive effect and risk of orthostatic hypotension (additive effects). Guanethidine has adverse clinically significant interactions documented..

Atropine and other atropine derivatives: imipramine antidepressants, histamine H1-receptor antagonists, anticholinergic, antiparkinsonism agents, atropinic antispasmodics, disopyramide: build up of atropine-associated adverse effects such as urinary retention, constipation and dry mouth and heat stroke etc.

Other CNS depressants: morphine derivatives (analgesics, antitussives and substitution treatments), barbiturates, benzodiazepines, anxiolytics other than benzodiazepines, hypnotics, sedative anti-depressants, histamine H1 receptor antagonists, central antihypertensive agents increased central depression. Changes in alertness can make it dangerous to drive or operate machinery.

4.6 Pregnancy and lactation

Pregnancy

There is inadequate evidence of the safety of chlorpromazine in human pregnancy. There is evidence of harmful effects in animals, so like other drugs, it should be avoided in pregnancy unless the physician considers it essential. It may occasionally prolong labour and at such a time should be withheld until the cervix is dilated 3-4cm. Possible adverse effects on the foetus include lethargy or paradoxical hyperexcitability, tremor and low Apgar score.

A large amount of exposure to chlorpromazine during pregnancy did not reveal any teratogenic effect.

It is advised to keep an adequate maternal psychic balance during pregnancy in order to avoid decompensation. If a treatment is necessary to ensure this balance, the treatment should be started or continued at effective dose all through the pregnancy.

Neonates exposed to antipsychotics (including chlorpromazine) during the third trimester of pregnancy are at risk of adverse reactions including extrapyramidal and/or withdrawal symptoms that may vary in severity and duration following delivery. There have been reports of agitation, hypertonia, hypotonia, tremor, somnolence, respiratory distress, bradycardia, tachycardia, feeding disorder, meconium ileus, delayed meconium passage, abdominal bloating. Consequently, newborns should be monitored carefully in order to plan appropriate treatment.

Breast-feeding

Chlorpromazine being excreted in milk, breast-feeding is not recommended during treatment.

Fertility

A decrease in fertility was observed in female animals treated with chlorpromazine. In male animals data are insufficient to assess fertility.

In humans, because of the interaction with dopamine receptors, chlorpromazine may cause hyperprolactinaemia which can be associated with impaired fertility in women (see Section 4.8). In men, data on consequences of hyperprolactinaemia are insufficient with regard to fertility.

4.7 Effects on ability to drive and use machines

The attention of patients, particularly drivers and machine operators, should be drawn to the risk of drowsiness with this medication especially at the start of treatment.

4.8 Undesirable effects

The following undesired events, listed by body system, have been reported with the following frequencies: very common ($\geq 1/10$), common ($\geq 1/100$ to $< 1/10$), uncommon ($\geq 1/1000$ to $< 1/100$), rare ($\geq 1/10,000$ to $< 1/1,000$), very rare ($< 1/10,000$), not known (cannot be estimated from the available data).

System organ class	Very common ($\geq 1/10$)	Common ($\geq 1/100$ to $< 1/10$)	Not known (cannot be estimated from available data)
Blood and lymphatic system disorders			Agranulocytosis Leukopenia
Immune system disorders			Systemic lupus erythematosus Antinuclear antibody positive ¹ Bronchospasm Anaphylactic reactions
Endocrine disorders		Hyperprolactinaemia Amenorrhoea	Galactorrhoea Gynaecomastia Erectile dysfunction Impotence Female sexual arousal disorder
Metabolism and nutrition disorders	Weight increased	Glucose tolerance impaired (see Section 4.4)	Hyperglycaemia (see Section 4.4) Hypertriglyceridaemia Hyponatraemia Inappropriate antidiuretic hormone secretion

Psychiatric disorders		Anxiety	Lethargy Mood altered
Nervous system disorders	Sedation ² Somnolence ² Dyskinesia (Acute dystonias or dyskias, unusually transitory are more common in children and young adults and usually occur within the first 4 days of treatment or after dosage increases) Tardive dyskinesia ³ Extrapyramidal disorder Akathisia often after large initial dose	Hypertonia Convulsion	Torticollis Oculogyric crisis Trismus Akinesia Hyperkinesia Neuroleptic malignant syndrome (hyperthermia, rigidity, autonomic dysfunction and altered consciousness) (see Section 4.4.) Parkinsonism (more common in adults and the elderly. It usually develops after weeks or months of treatment) to include tremor, rigidity or other features of Parkinsonism
Eye disorders			Accommodation disorder ⁴ Deposit eye ⁵ Ocular changes ⁷
Cardiac disorders		ECG changes include Electrocardiogram QT Prolonged (as with other neuroleptics) (see Section 4.4), ST depression, U-Wave and T-Wave changes	Cardiac arrhythmias including Ventricular arrhythmia, a-v block, Ventricular fibrillation Ventricular tachycardia Torsade de pointes Cardiac arrest has been reported during neuroleptic phenothiazine therapy, possibly related to dosage. Pre-existing cardiac disease, old afe, hypokalaemia and concurrent tricyclic antidepressants may predispose. Sudden death/sudden cardiac death (with possible causes of cardiac origin as well as cases of unexplained sudden death, in patients receiving neuroleptic phenothiazines) (see Section 4.4)
Vascular disorders	Orthostatic hypotension (Elderly or volume depleted subjects are particularly susceptible: it		Embolism venous Pulmonary embolism (sometimes fatal) Deep vein thrombosis (see

	is more likely to occur after intramuscular administration).		Section 4.4)
Respiratory, thoracic and mediastinal disorders			Respiratory depression Nasal stuffiness
Gastrointestinal disorders	Dry mouth Constipation (see Section 4.4)		Colitis ischaemic Ileus paralytic (see Section 4.4) Intestinal perforation (sometimes fatal) Gastrointestinal necrosis (sometimes fatal) Necrotising colitis (sometimes fatal) Intestinal obstruction
Hepatobiliary disorders			Jaundice cholestatic ⁶ Hepatocellular Liver injury ⁶ Cholestatic liver injury ⁶ Mixed liver injury
Skin and subcutaneous tissue disorders			Dermatitis allergic Contact skin sensitisation may occur rarely in those frequently handling preparation of chlorpromazine (see section 4.4) Skin rashes Angioedema Urticaria Photosensitivity reaction
Renal and urinary disorders			Urinary retention ⁴
Pregnancy, puerperium and perinatal conditions			Drug withdrawal syndrome neonatal (see Section 4.6)
Reproductive system and breast disorders			Priapism
General disorders and administration site conditions			Temperature regulation disorder Insomnia Agitation

¹ may be seen without evidence of clinical disease

² particularly at the start of treatment

³ particularly during long term treatment; may occur after the neuroleptic is withdrawn and resolve after reintroduction of treatment or if the dose is increased

⁴ linked to anticholinergic effects

⁵ in the anterior segment of the eye caused by accumulation of the drug but generally without any impact on sight

⁶ A premonitory sign may be a sudden onset of fever after one to three weeks of treatment followed by the development of jaundice. Chlorpromazine jaundice has the biochemical and other characteristics of obstructive (cholestatic) jaundice and is associated with obstructions of the canaliculi by bile thrombi; the frequent presence of an accompanying eosinophilia indicates the allergic nature of this phenomenon. Liver injury, sometimes fatal, has been reported rarely in patients treated with chlorpromazine. Treatment should be withheld on the development of jaundice (see section 4.4)

⁷ The development of a metallic greyish-mauve coloration of exposed skin has been noted in some individuals, mainly females, who have received chlorpromazine continuously for long periods (four to eight years).

4.9 Overdose

Toxicity and treatment of overdosage: Symptoms of chlorpromazine overdosage include drowsiness or loss of consciousness, hypotension, tachycardia, E.C.G. changes, ventricular arrhythmias and hypothermia, Parkinsonism, convulsions and coma. Severe extra-pyramidal dyskinesias may occur.

Treatment should be symptomatic with continuous respiratory and cardiac monitoring (risk of prolonged QT interval) until the patient's condition resolves.

If the patient is seen sufficiently soon (up to 6 hours) after ingestion of a toxic dose, gastric lavage may be attempted. Pharmacological induction of emesis is unlikely to be of any use. Activated charcoal should be given. There is no specific antidote. Treatment is supportive.

Generalised vasodilatation may result in circulatory collapse; raising the patient's legs may be sufficient in mild hypotension but, in severe cases, volume expansion by intravenous fluids may be needed; infusion fluids should be warmed before administration in order not to aggravate hypothermia.

Positive inotropic agents such as dopamine may be tried if fluid replacement is insufficient to correct the circulatory collapse. Peripheral vasoconstriction agents are not generally recommended; avoid use of adrenaline.

Ventricular or supraventricular tachy-arrhythmias usually respond to restoration of normal body temperature and correction of circulatory or metabolic disturbances. If persistent or life threatening, appropriate antiarrhythmic therapy may be considered. Avoid lidocaine and, as far as possible, long acting antiarrhythmic drugs.

Pronounced central nervous system depression requires airway maintenance or, in extreme circumstances, assisted respiration. Severe dystonic reactions usually respond to procyclidine (5-10 mg) or orphenedrine (20-40 mg) administered intramuscularly or intravenously. Convulsions should be treated with intravenous diazepam.

Neuroleptic malignant syndrome should be treated with cooling. Dantrolene sodium may be tried.

5. Pharmacological properties

5.1 Pharmacodynamic properties

Pharmacotherapeutic Group: Antipsychotics, ATC Code: N05AA01. Chlorpromazine is a phenothiazine neuroleptic.

Chlorpromazine has depressant actions on the Central Nervous System, with alpha-adrenergic blocking and anticholinergic activities. It inhibits Dopamine and Prolactin release-inhibitory factor, thus stimulating the release of Prolactin. It increases the turnover of Dopamine in the brain.

It has anti-emetic, anti-pruritic, serotonin-blocking and weak anti-histamine properties and slight ganglion blocking activity. It inhibits the heat regulating centre in the brain, and is analgesic and can relax skeletal muscle.

Due to its action on the autonomic system it produces vasodilation, hypotension and tachycardia.

Salivary and gastric secretions are reduced.

5.2 Pharmacokinetic properties

Chlorpromazine is rapidly absorbed and widely distributed in the body. It is metabolised in the liver and excreted in the urine and bile. Whilst plasma concentration of chlorpromazine itself rapidly declines excretion of chlorpromazine metabolites is very slow. The drug is highly bound to plasma protein. It readily diffuses across the placenta. Small quantities have been detected in milk from treated women. Children require smaller dosages per kg than adults.

5.3 Preclinical safety data

Not applicable.

6. Pharmaceutical particulars

6.1 Incompatibilities

Chlorpromazine can increase the central nervous system depression produced by other CNS-depressant drugs including alcohol, hypnotics, sedatives or strong analgesics.

It antagonises the action of adrenaline and other sympathomimetic agents and reverses the blood pressure lowering effects of adrenergic blocking agents such as guanethidine and clonidine. It may impair the metabolism of tricyclic antidepressants, the anti-Parkinson effects of levodopa and the effects of anticonvulsants; it may possibly affect the control of diabetes, or the action of anticoagulants. Antacids can impair absorption. Tea and coffee may prevent absorption by causing insoluble precipitates.

Undesirable anticholinergic effects can be enhanced by anti-Parkinson or other anticholinergic drugs. It may enhance the cardiac-depressant effects of quinidine, the absorption of corticosteroids and digoxin, the effect of diazoxide and of neuromuscular blocking agents. Interactions with propranolol have been reported. The possibility of interaction with lithium should be borne in mind.

Further information: Chlorpromazine is a phenothiazine with an aliphatic side-chain. Its pharmacological profile of activity includes pronounced sedative and hypotensive properties, with fairly marked anticholinergic and anti-emetic activity and a moderate tendency to cause extrapyramidal reactions.

6.2 Shelf life

36 months

6.3 Special precautions for storage

Do not store above 30°C. Store in the original package.

6.4 Special precautions for disposal and other handling

Not applicable

6.5 Nature and contents of container

Type I clear glass ampoule containing 2 ml solution for injection.

7. Marketing authorization holder

Hanbet Pharmaceuticals Ltd.

No 118, Murtala Mohammed Way, Ebute Meta, Lagos State, Nigeria

Manufactured by: Jiangsu Ruinian Qianjin Pharmaceutical Co., Ltd.

Chuanbu Village, Dingshu Town, Yixing, Jiangsu Province, China