

be carefully monitored and in case of adverse reactions it is necessary to take appropriate measures, as e.g. to reduce the dosage or to discontinue the therapy.

This medicinal product contains lactose. Patients with rare hereditary problems of galactose intolerance, total lactase deficiency or glucose-galactose malabsorption should not take this medicine.

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

50mg Tablet

1 NAME OF THE MEDICINAL PRODUCT

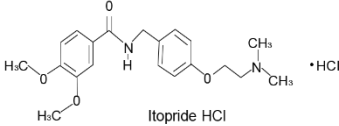
ITOWAN 50 mg film-coated tablets

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each film-coated tablet contains 50 mg of itopride hydrochloride.

DESCRIPTION

ITOWAN (Itopride HCl) is a prokinetic benzamide derivative. It inhibits dopamine and have a gastrokinetic effect. Chemically, Itopride HCl is N-[4-[2-(Dimethylamino) ethoxy]benzyl]-3,4-dimethoxybenzamide monohydrochloride. Its molecular formula is C₂₀H₂₆N₂O₄.HCl and the structural formula is:



4 CLINICAL PARTICULARS

4.1 Therapeutic indications

Treatment of gastrointestinal symptoms of functional dyspepsia caused by reduced gastrointestinal motility. The medicinal product is intended for adults.

4.2 Posology and method of administration

Posology

The recommended dose for adults is 1 tablet 3 times a day before meal, corresponding to 150 mg of itopride daily. The maximum daily dose is 150 mg of itopride.

This dose can be reduced if required in the course of disease. The exacte and duration of treatment depends on the clinical state of the patient. ITOWAN should not be used for more than 8 weeks

Paediatric population

Safety of this product in children under the age of 16 has not been established.

Hepatic or renal impairment

Itopride is metabolised in liver. Itopride and its metabolites are excreted mainly via kidneys (see section 5.2). Patients with reduced hepatic or renal functions should be carefully monitored and in case of adverse reactions it is necessary to take appropriate measures, as e.g. to reduce the dosage or to discontinue the therapy.

Elderly

It was shown in clinical studies that the incidence of adverse effects in patients aged 65 years and older was not higher than in younger patients. Itopride should be administered in elderly patients with adequate caution because of increased incidence of hepatic and renal function disorders, other diseases or treatment with additional drugs.

Method of administration

Tablets should be swallowed whole with a sufficient amount of liquid, before meals.

4.3 Contraindications

Hypersensitivity to the active substance

ITOWAN should not be used in patients in whom increased gastrointestinal motility could be harmful, e.g. in patients with gastrointestinal haemorrhage, mechanical obstruction or perforation.

4.4 Special warnings and precautions for use

Itopride potentiates acetylcholine action and can induce cholinergic side effects. Data about long-term administration of itopride is not available.

Hepatic or renal impairment

Itopride is metabolised in liver. Itopride and its metabolites are excreted mainly via kidneys. Patients with reduced hepatic or renal functions should

4.5 Interaction with other medicinal products and other forms of interaction

No interaction was detected when itopride was administered concomitantly with warfarin, diazepam, diclofenac, ticlopidine, nifedipine and nicardipine. Drug-drug interactions that arise due to cytochrome P450 metabolism are not assumed because itopride is metabolised mainly by flavine monooxygenase.

Itopride has gastrokinetic effect that could influence the absorption of concomitantly orally administered medicines. Particular attention should be paid to medicines with a narrow therapeutic index, medicines with prolonged-release of the active substance and enteric-coated drug formulations.

Anticholinergic agents may reduce the action of itopride.

Substances as cimetidine, ranitidine, teprone and cetraxate do not affect prokinetic activity of itopride.

4.6 Fertility, pregnancy and lactation

Pregnancy

There are no or limited amount of data from the use of itopride in pregnant women. Therefore itopride can be used during pregnancy and in women of childbearing potential only if therapeutic benefits outweigh possible risks considerably.

Breast-feeding

Itopride is excreted in the milk of lactating rats. Due to the potential for adverse reactions in infants, a decision must be made whether to discontinue breast-feeding or to abstain from itopride therapy taking into account the benefit of breast-feeding for the child and the benefit of therapy for the woman.

Fertility

No effects of itopride on fertility have been shown.

4.7 Effects on ability to drive and use machines

Although no effects on ability to drive and use machines have been found, impairment of alertness cannot be ruled out since dizziness may occur very rarely.

4.8 DOSAGE & ADMINISTRATION

The usual adult dosage for oral use is 150 mg of ITOWAN (Itopride HCl) daily in three divided doses before meals. The dose may be reduced according to patient's age and symptoms.

4.8 Undesirable effects

Adverse reactions have been ranked according to MedDRA terminology under headings of frequency using the following convention: very common (≥1/10); common (≥1/100 to <1/10); uncommon (≥1/1,000 to <1/100); rare (≥1/10,000 to <1/1,000); very rare (<1/10,000); not known (cannot be estimated from the available data).

Itopride was well tolerated and no serious adverse reactions were observed during clinical trials.

System Organ Class	Side effect	Frequency
Blood and lymphatic system disorders	Leucopenia*	Uncommon
	Thrombocytopenia	Not known
Immune system disorders	Anaphylactoid reaction	Not known
Endocrine disorders	Hyperprolactinaemia**	Uncommon
	Gynecomastia	Not known
Nervous system disorders	Headache	Uncommon
	Dizziness	Uncommon
	Tremor	Not known
Gastrointestinal disorders	Diarrhoea	Uncommon
	Constipation	Uncommon
	Abdominal pain	Uncommon
	Hypersalivation	Uncommon

	Nausea	Not known
<u>Hepatobiliary disorders</u>	Jaundice	Not known
<u>Skin and subcutaneous tissue disorders</u>	Rash	Rare
	Erythema	Rare
	Pruritus	Rare
<u>Investigations</u>	AST increased	Not known
	ALT increased	Not known
	Gamma-GTP increased	Not known
	Alkaline phosphatase increased	Not known
	Bilirubin increased	Not known

* Careful observation should be made through haematological examination. The treatment should be discontinued when any abnormality is observed.

** If galactorrhea or gynaecomastia occur, the treatment must be interrupted or terminated.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via

NAWAN LABORATORIES (PVT.) LTD.

Website: www.nawanlab.com

4.9 Overdose

Overdose was not experienced in humans. In case of overdose the usual measures of gastric lavage and symptomatic therapy should be applied.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group:

Drugs for functional gastrointestinal disorders, propulsives;

Mechanism of action

Itopride activates the gastrointestinal propulsive motility by dopamine D2 receptors antagonistic action and acetylcholine esterase inhibitory action. Itopride activates acetylcholine release and inhibits its degradation. In addition, itopride has an antiemetic action which is based on interaction with dopamine D2 receptors in chemoreceptor zone. This action was demonstrated by dose dependent inhibition of apomorphine induced vomiting in dogs.

Itopride accelerates stomach emptying in humans and does not influence plasma concentrations of gastrin.

Itopride has high specific action in upper part of gastrointestinal tract, where it positively effects functional dyspepsia, defined by one or more symptoms: postprandial fullness, early satiety, epigastric pain, and epigastric burning and no evidence of structural disease (including at upper endoscopy) that is likely to explain the symptoms.

The duration of the administration in clinical studies was maximally 8 weeks.

5.2 Pharmacokinetic properties

Absorption

Itopride is absorbed rapidly and almost completely from gastrointestinal tract. Relative bioavailability about 60% is due to first-pass effect. Food does not affect bioavailability of the product. Maximum plasma concentrations are reached in 30 to 45 minutes after administration of 50 mg of itopride.

After repeated administration of doses in the range of 50 to 200 mg 3 times a day for period of 7 days, itopride and its metabolites have shown pharmacokinetics of linear type with minimal accumulation.

Distribution

About 96% of itopride is bound on plasma proteins, mainly albumin. Less than 15% of itopride bound part is bound on alpha-1-acid-glycoprotein.

In rats itopride is distributed extensively in the tissues ($V_d\beta = 6.1 \text{ l/kg}$) except for central nervous system; high concentrations are reached in kidneys, small intestine, liver, adrenal glands and stomach. Protein binding in rats was lower than in humans (78% contrary to 96%). Penetration into the central nervous system was minimal. Itopride is excreted in milk of lactating rats.

Biotransformation

Itopride is extensively metabolised in liver in humans. Three metabolites were identified of which only one manifests minor activity without pharmacological significance (about 2 to 3% of itopride effect).

Itopride is metabolised by flavine monooxygenase (FMO3). The amount and efficacy of human FMO isoenzymes can be associated with genetic polymorphism which can result in rare autosomal recessive condition known

as trimethylaminuria (fish odour syndrome). Biological half-life in patients with trimethylaminuria can be longer.

Pharmacokinetic in vivo studies of CYP-mediated reactions did not prove inhibition or induction CYP2C19 and CYP2E1 caused by itopride. Administration of itopride did not influence content of CYP or the activity of uridine-diphosphate-glucuronyl transferase.

Elimination

Itopride and its metabolites are primarily excreted by urine. The amount of excreted itopride and N-oxide after oral single therapeutic dose to healthy volunteers was 3.7% and 75.4% respectively.

Half-life of itopride is about 6 hours.

5.3 Preclinical safety data

Preclinical safety studies were carried out only at exposures considered sufficiently in excess of therapeutic human doses indicating little relevance to clinical use. In addition humans are less sensitive to hormonal effects observed in animals.

High doses of itopride (30 mg/kg/day) caused hyperprolactinaemia and secondary reversible hyperplasia of uterine mucosa in rats, but not in dogs (dose up to 100 mg/kg/day) or primates (dose up to 300 mg/kg/day).

In a 3-month toxicity study in dogs, prostate atrophy was observed after oral doses of 30 mg/kg/day, but not after 6-month oral administration of higher doses (100 mg/kg/day) in rats, nor more higher doses (300 mg/kg/day) in primates.

Long-term studies of carcinogenic potential in animals have not been carried out.

No clastogenic or mutagenic effects of itopride were found in a series of in vitro and in vivo tests.

Fertility studies in female rats receiving doses of 30 mg/kg/day and higher, showed hyperprolactinaemia and secondary prolongation of oestral cycle. Prolonged precoital interval was observed at doses 300 mg/kg/day. No side effect on copulation or fertility were observed.

6 PHARMACEUTICAL PARTICULARS

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

2 years.

6.4 STORAGE

Store at 25°C (Excursions permitted between 15°C-30°C).

Protect from sunlight and moisture.

The expiration date refers to the product correctly stored at the required conditions.

Keep out of Reach of children

6.5 How to supplies

ITOWAN (Itopride HCl) Tablets 50mg are available in blister packs of 10's.

6.6 Special precautions for disposal and other handling

Any unused medicinal product or waste material should be disposed in accordance with local requirements.

آئیٹووان ۵۰ ملی گرام ٹیبلیٹس

(آئیٹوپرائڈ)

خبردار: ڈاکٹر کی ہدایت کے مطابق استعمال کریں۔

ہدایات: صرف مستند ڈاکٹر کے نسخہ پر فروخت کی جائے۔

دوا کو ڈاکٹری سے کم درجہ پر حراست رکھیں۔ دھوپ اور نمی سے بچائیں۔ بچوں کی پہنچ سے دور رکھیں۔

MANUFACTURED BY:



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