The mechanism of action of Tigan® as determined in animals is obscure, but may involve the chemoreceptor trigger zone (CPTZ), an area in the medulla oblongata through which emetic impulses are conveyed to the vomiting center; direct impulses to the vomiting center appear to be similarly unaffected. In dogs pretreated with trimethobenzamide HCI, the emetic response to apomorphine is inhibited, while little or no protection is afforded against emesis induced by intragastric copper sulfate.

Indications
Tigan® is indicated for the treatment of postoperative nausea and vomiting and for nausea associated with gynecologic procedures.

Contraindications
The injectable form of Tigan® (trimethobenzamide hydrochloride) is available as a single-dose vial and a multiple-dose vial specially designed for use with a syringe. The injectable form of Tigan® is not recommended for intravenous use.

Adverse Reactions
There have been reports of hypersensitivity reactions and Parkinson-like symptoms. There have been instances of hypertension reported following parenteral administration to surgical patients. There have been reports of blood dyscrasias, flushing of vision, coma, convulsions, depression of mood, dizziness, drowsiness, headache, jaundice, muscle cramps and opisthotonos. If these occur, the administration of the drug should be discontinued. Allergic-type skin reactions have been observed; therefore, the drug should be discontinued at the first sign of sensitization. While these symptoms will usually disappear spontaneously, symptomatic treatment may be indicated in some cases.

Administration
Each 2-mL single-dose vial contains 200 mg trimethobenzamide hydrochloride (3,4,5-trimethoxybenzamide monohydrochloride). It has a molecular weight of 424.93 and the following structural formula:

Single Dose Vials:
Each 2-mL single-dose vial contains 200 mg trimethobenzamide hydrochloride (3,4,5-trimethoxybenzamide monohydrochloride) with 1 mg sodium citrate and 0.4 mg citric acid as buffers and pH adjusted to approximately 5.0 with sodium hydroxide.

Multi-Dose Vials:
Each mL contains 100 mg trimethobenzamide in patients with renal failure or those undergoing dialysis. There may be a increased risk of toxicity as it is not recommended for intravenous use.

CLINICAL PHARMACOLOGY
Mechanism of Action
The pharmacokinetics of trimethobenzamide have been studied in healthy adult subjects. Following administration of 200 mg (100 mg/mL) Tigan IM injection, the time to reach maximum plasma concentration (Tmax) was about half an hour; about 15 minutes longer for Tigan 300 mg IM injection. Single dose of Tigan 300 mg oral capsule provided a plasma concentration profile of trimethobenzamide similar to Tigan 200 mg IM. The relative bioavailability of the capsule formulation compared to the solution is 105%. The mean elimination half-life of trimethobenzamide is 7 to 9 hours. Between 30 – 50% of a single dose in humans is excreted unchanged in the urine in about 48 hours. The metabolic degradation of trimethobenzamide in humans is not known. Specifically, it is not known if active metabolites are generated in humans.

Special Populations
Age
The clearance of trimethobenzamide is not known in elderly patients with renal impairment. However, it may be advisable to consider reduction in the dosing of trimethobenzamide in elderly patients with renal impairment considering that a substantial amount of excretion and elimination of trimethobenzamide occurs via the kidney and that elderly patients may have various degrees of renal impairment. (See PRECAUTIONS: General and DOSAGE AND ADMINISTRATION).

Gender
Systemic exposure to trimethobenzamide was similar between men (N=40) and women (N=28).

Race
Pharmacokinetics appeared to be similar for Caucasians (N=18) and African Americans (N=12).

Renal Impairment
The clearance of trimethobenzamide is not known in patients with renal impairment. However, it may be advisable to consider reduction in the dosing of trimethobenzamide in patients with renal impairment considering that a substantial amount of excretion and elimination of trimethobenzamide occurs via the kidney and that elderly patients may have various degrees of renal impairment. (See PRECAUTIONS: General and DOSAGE AND ADMINISTRATION).

INDICATIONS
Tigan® is indicated for the treatment of postoperative nausea and vomiting and for nausea associated with gynecologic procedures.

CONTRAINdications
The injectable form of Tigan® is contraindicated in pediatric use and in patients with known hypersensitivity to trimethobenzamide.

WARNINGS
Tigan® may produce drowsiness. Patients should not operate motor vehicles or other dangerous machinery until their individual responses have been determined.

Usage in Pregnancy:
Trimethobenzamide hydrochloride was studied in reproduction experiments in rats and rabbits and no teratogenicity was suggested. The only effect observed were an increased percentage of enterochromaffin or stomachgut papillae in rats administered 20 mg and 100 mg/kg and increased resorptions in rabbits receiving 100 mg/kg. In each study these adverse effects were attributed to one or two dams. The relevance to humans is not known. Since there is no adequate experience in pregnant or lactating women who have received this drug, safety in pregnancy or in nursing mothers has not been established.

Usage with Alcohol:
Concomitant use of alcohol with Tigan® may result in an adverse drug interaction.

PRECAUTIONS
Usage in Renal Failure
A substantial route of elimination of unchanged trimethobenzamide is renal. Dosage adjustment should be considered in patients with reduced renal function including some elderly patients. (See CLINICAL PHARMACOLOGY and DOSAGE AND ADMINISTRATION).

Geriatric Use
Clinical studies of trimethobenzamide hydrochloride did not include sufficient numbers of patients aged 65 and over to determine whether they respond differently from younger patients. Although there are studies reported in the literature that include elderly patients < 65 years old with younger patients, it is not known if there are differences in efficacy or safety parameters for elderly and non-elderly patients treated with trimethobenzamide. In general, dose selection for an elderly patient should be cautious, usually starting at the low end of the dosage range, reflecting the greater frequency of decreased hepatic, renal, or cardiac function, and of concomitant disease or other drug therapy. This drug is known to be substantially excreted by the kidney, and the risk of toxic reactions to this drug may be greater in patients with impaired renal function. Because elderly patients are more likely to have decreased renal function, care should be taken in dose selection, and it may be useful to monitor renal function. (See CLINICAL PHARMACOLOGY and DOSAGE AND ADMINISTRATION).

ADVERSE REACTIONS
There have been reports of hypersensitivity reactions and Parkinson-like symptoms. There have been instances of hypertension reported following parenteral administration to surgical patients. There have been reports of blood dyscrasias, flushing of vision, coma, convulsions, depression of mood, dizziness, drowsiness, headache, jaundice, muscle cramps and opisthotonos. If these occur, the administration of the drug should be discontinued. Allergic-type skin reactions have been observed; therefore, the drug should be discontinued at the first sign of sensitization. While these symptoms will usually disappear spontaneously, symptomatic treatment may be indicated in some cases.

For medical advice about adverse reactions contact your medical professional. To report SUSPECTED ADVERSE REACTIONS, contact Par Pharmaceutical, at 1-800-828-9393 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

DOSAGE AND ADMINISTRATION
(See WARNINGS and PRECAUTIONS)
Dosage should be adjusted according to the indication for therapy, severity of symptoms and the response of the patient.

Geriatric Patients
Dose adjustment such as reducing the total dose administered at each dosing or increasing the dosing interval should be considered in elderly patients with renal impairment (creatinine clearance ≤ 70 mL/min/1.73m²), final dose adjustment should be based upon integration of clinical efficacy and safety considerations. (See CLINICAL PHARMACOLOGY and PRECAUTIONS).

Patients with Renal Impairment
In subjects with renal impairment (creatinine clearance ≤ 70 mL/min/1.73m²), dose adjustment such as reducing the total dose administered at each dosing or increasing the dosing interval should be considered. (See CLINICAL PHARMACOLOGY and DOSAGE AND ADMINISTRATION).

INJECTABLE: 100 mg/mL. (Not for use in pediatric patients)

Usual Adult Dosage
2 mL (200 mg) t.i.d. or q.i.d. intramuscularly.

NOTE: The injectable form is intended for intramuscular administration only. It is not recommended for intravenous use.

Intramuscular administration may cause pain, stinging, burning, redness and swelling at the site of injection. Such effects may be minimized by deep injection into the upper outer quadrant of the gluteal region, and by avoiding the escape of solution along the route.

Storage
Store between 20° to 25°C (68° to 77°F).

(See USP Controlled Room Temperature.)

HOW SUPPLIED
Tigan® (trimethobenzamide hydrochloride) is available as:

NDC 42023-118-25 100 mg/mL in 2 mL Single Dose Vials, Pack of 25.
NDC 42023-118-01 100 mg/mL in 20 mL Multiple Dose Vials, Pack of 1

Rx Only

Distributed by:
Par Pharmaceutical
Chesnut Ridge, NY 10977

NDC 42023-118-25 100 mg/mL in 2 mL Single Dose Vials, Pack of 25.

NDC 42023-118-01 100 mg/mL in 20 mL Multiple Dose Vials, Pack of 1

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