TYO

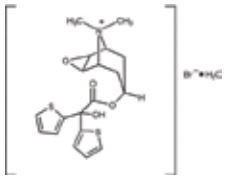
[Tiotropium bromide]

Rotacaps

ٹائیو روٹا کیپس

Capsules
18 mcg

DESCRIPTION
It is a synthetic, non-chiral, quaternary ammonium compound. It is sparingly soluble in water and soluble in methanol. The dry powder formulation within the **TYO** capsule is intended for oral inhalation only. The drug substance. tiotropium bromide monohydrate, is an anticholinergic with specificity for muscarinic receptors.



QUALITATIVE & QUANTITATIVE COMPOSITION
TYO (Tiotropium Bromide) is available for oral inhalation as:

TYO Rotacaps 18mcg
Each rota capsule contains:
Tiotropium as Bromide monohydrate……18 mcg

CLINICAL PHARMACOLOGY
Mechanism of Action
Tiotropium is a long-acting, antimuscarinic agent, which is often referred to as an anticholinergic It has similar affinity to the subtypes of muscarinic receptors, M1 to M5.
By binding to the muscarinic receptors in the bronchial smooth musculature, tiotropium bromide inhibits the cholinergic (bronchoconstrictive) effects of acetylcholine, released from parasympathetic nerve endings. The long duration is probably due to the very slow dissociation from M3 receptor, exhibiting a significantly longer dissociation half-life than ipratropium.

Pharmacokinetics
Tiotropium is administered by dry powder inhalation. In common with other inhaled drugs, the majority of the delivered dose is deposited in the gastrointestinal tract and to a lesser extent, in the lung, the intended organ.
It is expected from the chemical structure of the compound (quaternary ammonium compound) that tiotropium is poorly absorbed from the gastrointestinal tract. The effect of food on tiotropium's bioavailability has not been studied.
Tiotropium shows a volume of distribution of 32 L/kg indicating that the drug binds extensively to tissues. The human plasma protein binding for tiotropium is 72%.

It is metabolized by cytochrome P450-dependent oxidation and subsequent glutathione conjugation to a variety of Phase II metabolites. This enzymatic pathway can be inhibited by CYP450 2D6 and 3A4 inhibitors, such as quinidine, ketoconazole, and gestodene. Thus, CYP450 2D6 and 3A4 are involved in the metabolic pathway that is responsible for the elimination of a small part of the administered dose.

SPECIAL POPULATION
Pregnancy Category C
There are no adequate and well controlled studies of **TYO** Rotacaps in pregnant women. Administration of **TYO** Rotacaps in pregnant woman should only be considered if the potential benefit justifies the potential risk to the fetus.

Lactation
Clinical data from nursing women exposed to tiotropium are not available. It is not known that the tiotropium excreted in human milk, but because many drugs excreted in human milk, so caution should be exercised if **TYO** Rotacaps is administered to a nursing woman.

THERAPEUTIC INDICATIONS
TYO (Tiotropium bromide) is indicated in the maintenance treatment of chronic obstructive pulmonary disease (COPD) and maintenance treatment of asthma.

DOSAGE & ADMINISTRATION
Capsules are intended for use through SciAir only and are not to be swallowed. The recommended dosage of tiotropium is inhalation of one Rotacap once daily Tiotropium bromide should only be inhaled with SciAir device. The recommended dose should not be exceeded. Tiotropium bromide rotacaps must not be swallowed.

ADVERSE EFFECTS
Several organ systems and functions are under control of the parasympathetic nervous system and thus can be affected by anticholinergic agents. Possible adverse events attributable to systemic anticholinergic effects include dry month, dry throat, increased heart rate, blurred vision, glaucoma, urinary difficulty, urinary retention, and constipation. In addition, upper airway irritant phenomena were observed in patients receiving tiotropium bromide. An Increased incidence of dry mouth and constipation may occur with increasing age.
The most common anticholinergic adverse reaction reported by COPD patients was dry mouth which was mild in the majority of cases. In general, dry mouth had an onset between 3 and 5 weeks which resolved while patients continued to receive tiotropium bromide.The other reported adverse effects are diarrhea, hypertension, tonsillitis, abdominal pain, insomnia, angioedema, dehydration. arthralgia, muscle spasms, pain in extremity, chest pain, hepatic function abnormal, liver function test abnormal, atrial fibrillation, tachycardia. glossitis, stomatitis, urticarial, pharyngitis, cough, sinusitis, palpitations. oropharyngeal candidiasis, dizziness, dysphonia, pruritus, rash, dysphagia, gingivitis, intestinal obstruction Including ileus paralytic, joint swelling, dysuria, laryngitis, angioedema, dry skin, skin infection and skin ulcer.

CONTRAINDICATIONS
Tiotropium bromide inhalation powder is contraindicated in patients with hypersensitivity to tiotropium, atropine or its derivatives, e.g. ipratropium or oxitropium or to the excipient lactose monohydrate.

WARNING AND PRECAUTIONS
Tiotropium bromide, should not be used for the initial treatment of acute episodes of bronchospasm, i.e. rescue therapy.
Immediate hypersensitivity reactions may occur after administration of tiotropium bromide inhalation powder. As with other anticholinergic drugs, tiotropium bromide should be used with caution in patients with narrow-angle glaucoma, prostatic hyperplasia or bladder-neck obstruction.
Inhaled medicines may cause inhalation-induced bronchospasm Patients should be cautioned to avoid getting the drug powder into their eyes. This should be advised that it may result in precipitation or worsening of narrow-angle glaucoma, eye pain or discomfort temporary blurring of vision, visual halos or colored images in association with red eyes from conjunctival and corneal congestion. Patients should stop using tiotropium bromide and consult a physician immediately when signs and symptoms of narrow-angle glaucoma appear. Dry mouth, which has been observed wish anticholinergic treatment, in the long term may be associated with dental canes. Tiotropium bromide may not be used more frequently than once daily should be monitored closely for anticholinergic side effects.

DRUG INTERACTIONS
Tiotropium Bromide has been used concomitantly with short-acting and long-acting sympathomimetic (beta-agonists) bronchodilator, Methylxanthines, oral and inhaled steroids, antihistamine, mucolytic, leukotriene modifiers, cromones, and anti-Igf treatment without increase in adverse reactions.
There is a potential for an additive interaction with concomitantly used anticholinergic medications. Therefore, avoid coadminister of **TYO** Rotacaps with other anticholinergic containing drugs as this may lead to an increase in anticholinergic adverse effects.

OVERDOSAGE
High doses of tiotropium bromide may lead to anticholinergic signs and symptoms.

However, there were no systemic anticholinergic adverse effects following a single inhaled dose of up to 340 microgram tiotropium bromide reported. Additionally, no relevant adverse effects, beyond dry mouth, were observed following 7 day dosing of up to 170 microgram tiotropium bromide. In a multiple dose study in COPD patients with a maximum daily dose of 43 microgram tiotropium bromide over four weeks no significant undesirable effects have been observed.
Acute intoxication by inadvertent oral ingestion of tiotropium bromide capsules is unlikely due to low oral bioavailability.

STORAGE
Store at 25°C (excursions permitted between 15°C to 30°C).
Protect from sunlight and moisture.
The expiration date refers to the product correctly stored at the required conditions.

HOW SUPPLIED
TYO (Titropium Bromide) Rotacaps 18mcg Dry powder inhaler capsules are available in blister pack of 20's.
Capsules are intented for use through SciAir device and are not allowed to be swallowed.

Keep out of the reach of children.
To be sold on prescription of a registered medical practitioner only.

Please read the contents carefully before use.
This package insert is continually updated from time to time.

ہدایات:
دوا کو ۲۵ ڈگری سینٹی گریڈ درجہ حرارت پر رکھیں۔
(درجہ حرارت کی حد ۱۵ سے ۳۰ ڈگری سینٹی گریڈ ہے)۔
دھوپ اور نمی سے بچائیں۔ بچوں کی پہنچ سے دور رکھیں۔

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SCILIFE

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