Manufactured for :
Tamar & Pharez Nig. Ltd.
No. 2 Nyerere Street Narayi High Cost,
Barnawa, Kaduna (NIGERIA)

Manufactured in India by :
MAXTAR BIO-GENICS
Khasra No. 705, Vill. Malku Majra,
Nalagarh Road, Baddi,
Distt. Solan-173205 (H.P.)-India

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Mfg. Lic. No. :MNB/07/509
Batch No. :
Mfg. Date :
Exp. Date :

TAMISART-80 H
Telmisartan 80 mg & Hydrochlorothiazide 12.5 mg Tablets USP

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12.5 mg Tablets USP

TAMISART-80 H
Telmisartan 80 mg & Hydrochlorothiazide 12.5 mg Tablets USP

Warning : When pregnancy is detected Telmisartan should be discontinued as soon as possible as it can cause injury and even death to the developing foetus when used in pregnancy during second and third trimester of pregnancy.

3 Strips of 10 Tablets
FOR ORAL USE

PRESCRIPTION ONLY MEDICINE
KEEP THE MEDICINE OUT OF REACH OF CHILDREN

TAMISART-80 H
Telmisartan 80 mg & Hydrochlorothiazide
12.5 mg Tablets USP

NAFDAC REG. NO. :

Composition :
Each uncoated bilayered tablet contains :

Telmisartan	USP	80 mg
Hydrochlorothiazide	USP	12.5 mg
Excipients		q.s.
Colour : Red Oxide of Iron		

Dosage :
As directed by the physician.

Storage: Store below 30°C.
Protect from light & moisture.

SIZE : 75 X 185 MM FRONT

TAMISART-80 H

Telmisartan 80 mg & Hydrochlorothiazide 12.5 mg Tablets USP

SCHEDULING STATUS :
S3
PROPRIETARY NAME
(and dosage form):

Telmisartan 80 mg & Hydrochlorothiazide 12.5 mg Tablets USP
Composition :
Each uncoated bilayered tablet contains:

Telmisartan USP	80 mg
Hydrochlorothiazide USP	12.5 mg
Excipients	q.s.

Colour : Red Oxide of Iron

PHARMACOLOGICAL CLASSIFICATION:
A 7.1.3 Other hypotensives

Angiotensin II [formed from angiotensin I in a reaction catalyzed by angiotensin converting enzyme (ACE, kininase II)], is a potent vasoconstrictor, the primary vasoactive hormone of the renin-angiotensin system and an important component in the pathophysiology of hypertension. It also stimulates aldosterone secretion by the adrenal cortex. Telmisartan and its principal active metabolite block the vasoconstrictor and aldosterone-secreting effects of angiotensin II by selectively blocking the binding of angiotensin II to the AT1 receptor found in many tissues (e.g., vascular smooth muscle, adrenal gland). There is also an AT2 receptor found in many tissues but it is not known to be associated with cardiovascular homeostasis. Both Telmisartan and its principal active metabolite do not exhibit any partial agonist activity at the AT1 receptor and have much greater affinity (about 1000-fold) for the AT1 receptor than for the AT2 receptor. In vitro binding studies indicate that Telmisartan is a reversible, competitive inhibitor of the AT1 receptor. The active metabolite is 10 to 40 times more potent by weight than losartan and appears to be a reversible, non-competitive inhibitor of the AT1 receptor. Neither Telmisartan nor its active metabolite inhibits ACE (kininase II, the enzyme that converts angiotensin I to angiotensin II and degrades bradykinin); nor do they bind to or block other hormone receptors or ion channels known to be important in cardiovascular regulation. Hydrochlorothiazide is a thiazide diuretic. Thiazides affect the renal tubular mechanisms of electrolyte reabsorption, directly increasing excretion of sodium and chloride in approximately equivalent amounts. Indirectly, the diuretic action of hydrochlorothiazide reduces plasma volume, with consequent increases in plasma renin activity, increases in aldosterone secretion, increases in urinary potassium loss, and decreases in serum potassium. The renin-aldosterone link is mediated by angiotensin II, so coadministration of an angiotensin II receptor antagonist tends to reverse the potassium loss associated
Telmisartan is a specific antagonist of the angiotensin II receptor type AT1; it does not inhibit ACE (kininase II), the enzyme that degrades bradykinin. Removal of angiotensin II negative feed back on renin secretion leads to increased plasma renin activity, during Telmisartan administration. A 2 to 3-fold increase in angiotensin II in plasma comes as a result of increases in plasma renin activity. However, antihypertensive activity and suppression of plasma aldosterone concentration are apparent, indicating effective angiotensin II receptor blockade. After discontinuation of Telmisartan, plasma renin activity and angiotensin levels declined.
with these diuretics. The mechanism of the antihypertensive effect of thiazides is unknown.

INDICATIONS :
Indicated for the treatment of hypertension.
CONTRA-INDICATIONS:
Telmisartan & Hydrochlorothiazide Tablets contraindicated in patients with known hypersensitivity (e.g., anaphylaxis or angioedema) to telmisartan, hydrochlorothiazide, or any other component of this product.
WARNINGS & Precaution
Fetal Toxicity
Pregnancy Category D
Use of drugs that act on the renin-angiotensin system during the second and third trimesters of pregnancy reduces fetal renal function and increases fetal and neonatal morbidity and death. Resulting oligohydramnios can be associated with fetal lung hypoplasia and skeletal deformations. Potential neonatal adverse effects include skull hypoplasia, anuria, hypotension, renal failure, and death. When pregnancy is detected, discontinue telmisartan and hydrochlorothiazide tablets as soon as possible.
Thiazides cross the placental barrier and appear in cord blood. Adverse reactions include fetal or neonatal jaundice and thrombocytopenia.
Hypotension in Volume- or Salt-Depleted Patients
In patients with an activated renin-angiotensin system, such as volume- or salt-depleted patients (e.g., those being treated with high doses of diuretics), symptomatic hypotension may occur after initialization of treatment with telmisartan and hydrochlorothiazide tablets. Correct volume or salt depletion prior to administration of telmisartan and hydrochlorothiazide tablets.
Impaired Renal Function
Changes in renal function including acute renal failure can be caused by drugs that inhibit the renin-angiotensin system and by diuretics. Patients whose renal function may depend in part on the activity of the renin angiotensin system (e.g., patients with renal artery stenosis, chronic kidney disease, severe congestive heart failure, or volume depletion) may be at particular risk of developing oliguria, progressive azotemia, or acute renal failure on telmisartan and hydrochlorothiazide tablets. Monitor renal function periodically in these patients. Consider withholding or discontinuing therapy in patients who develop a clinically significant decrease in renal function on telmisartan and hydrochlorothiazide tablets.
Electrolytes and Metabolic Disorders
Drugs, including telmisartan, that inhibit the renin-angiotensin system can cause hyperkalemia, particularly in patients with renal insufficiency, diabetes, or combination use with other angiotensin receptor blockers or ACE inhibitors and the concomitant use of other drugs that raise serum potassium levels.
Hydrochlorothiazide can cause hypokalemia and hyponatremia. Thiazides have been shown to increase the urinary excretion of magnesium; this may result in hypomagnesemia. Hypomagnesemia can result in hypokalemia which may be difficult to treat despite potassium repletion. Monitor serum electrolytes periodically.
In controlled trials using the telmisartan/hydrochlorothiazide combination treatment, no patient administered 40 mg/12.5 mg, 80 mg/12.5 mg, or 80 mg/25 mg experienced a decrease in potassium ?1.4 mEq/L, and no patient experienced hyperkalemia.
Hydrochlorothiazide decreases urinary calcium excretion and may cause elevations of serum calcium.
Hydrochlorothiazide may alter glucose tolerance and raise serum levels of cholesterol and triglycerides.
Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy. Because telmisartan decreases uric acid, telmisartan in combination with hydrochlorothiazide attenuates the diuretic-induced hyperuricemia.
Hypersensitivity Reaction
Hydrochlorothiazide
Hypersensitivity reactions to hydrochlorothiazide may occur in patients with or without a history of allergy or bronchial asthma, but are more likely in patients with such a history.
Acute Myopia and Secondary Angle-Closure Glaucoma
Hydrochlorothiazide, a sulfonamide, can cause an idiosyncratic reaction, resulting in acute transient myopia and acute angle-closure glaucoma. Symptoms include acute onset of decreased visual acuity or ocular pain and typically occur within hours to weeks of drug initiation. Untreated acute angle-closure glaucoma can lead to permanent vision loss. The primary treatment is to discontinue hydrochlorothiazide as rapidly as possible. Prompt medical or surgical treatments may need to be considered if the intraocular pressure remains uncontrolled. Risk factors for developing acute angle-closure glaucoma may include a history of sulfonamide or penicillin allergy.
Systemic Lupus Erythematosus
Thiazide diuretics have been reported to cause exacerbation or activation of systemic lupus erythematosus.
Postsympathectomy Patients
The antihypertensive effects of hydrochlorothiazide may be enhanced in the postsympathectomy patient.

INTERACTIONS:
Telmisartan
Digoxin: When telmisartan was co-administered with digoxin, median increases in digoxin peak plasma concentration (49%) and in trough concentration (20%) were observed. It is, therefore, recommended that digoxin levels be monitored when initiating, adjusting, and discontinuing telmisartan to avoid possible over- or under-digitalization.
Lithium: Reversible increases in serum lithium concentrations and toxicity have been reported during concomitant administration of lithium with angiotensin converting enzyme inhibitors. Cases have also been reported with angiotensin II receptor antagonists including telmisartan. Because lithium should not be used with diuretics, the use of lithium with telmisartan and hydrochlorothiazide is not recommended.
Non-Steroidal Anti-Inflammatory Agents including Selective Cyclooxygenase-2 Inhibitors (COX-2 Inhibitors): In patients who are elderly, volume-depleted (including those on diuretic therapy), or with compromised renal function, co-administration of NSAIDs, including selective COX-2 inhibitors, with angiotensin II receptor antagonists, including telmisartan, may result in deterioration of renal function, including possible acute renal failure. These effects are usually reversible. Monitor renal function periodically in patients receiving telmisartan and NSAID therapy. The antihypertensive effect of angiotensin II receptor antagonists, including telmisartan may be attenuated by NSAIDs including selective COX-2 inhibitors.
Ramipril and Ramiprilat: Co-administration of telmisartan 80 mg once daily and ramipril 10 mg once daily to healthy subjects increases steady-state Cmax and AUC of ramipril 2.3 and 2.1 fold, respectively, and Cmax and AUC of ramiprilat 2.4 and 1.5 fold, respectively. In contrast, Cmax and AUC of telmisartan decrease by 31% and 16%, respectively. When co-administering telmisartan and ramipril, the response may be greater because of the possibly additive pharmacodynamic effects of the combined drugs, and also because of the increased exposure to ramipril and ramiprilat in the presence of telmisartan. Warfarin: Telmisartan administered for 10 days slightly decreased the mean warfarin trough plasma concentration; this decrease did not result in a change in International Normalized Ratio (INR).

Hydrochlorothiazide
When administered concurrently, the following drugs may interact with thiazide diuretics: Alcohol, barbiturates, or narcotics: Potentiation of orthostatic hypotension may occur. Antidiabetic drugs (oral agents and insulin): Dosage adjustment of the antidiabetic drug may be required. Other antihypertensive drugs: Additive effect or potentiation. Cholestyramine and colestipol resins: Absorption of hydrochlorothiazide is impaired in the presence of anionic exchange resins. Single doses of either cholestyramine or colestipol resins bind the hydrochlorothiazide and reduce its absorption from the gastrointestinal tract by up to 85% and 43%, respectively. Corticosteroids, ACTH: Intensified electrolyte depletion, particularly hypokalemia. Pressor amines (e.g., norepinephrine): Possible decreased response to pressor amines but not sufficient to preclude their use.
Skeletal muscle relaxants, nondepolarizing (e.g., tubocurarine): Possible increased responsiveness to the muscle relaxant

DOSAGE AND DIRECTIONS FOR USE:
The usual starting dose of telmisartan is 40 mg once a day; blood pressure response is dose related over the range of 20-80 mg. Patients with depletion of intravascular volume should have the condition corrected or telmisartan tablets should be initiated under close medical supervision (see WARNINGS, Hypotension in Volume-Depleted Patients). Patients with biliary obstructive disorders or hepatic insufficiency should have treatment started under close medical supervision (see PRECAUTIONS). Hydrochlorothiazide is effective in doses of 12.5 mg to 50 mg once daily SIDE-EFFECTS AND SPECIAL PRECAUTIONS:

OVERDOSAGE :
Telmisartan
Limited data are available with regard to overdosage in humans. The most likely manifestations of overdosage with telmisartan would be hypotension, dizziness and tachycardia; bradycardia could occur from parasympathetic (vagal) stimulation. If symptomatic hypotension should occur, supportive treatment should be instituted. Telmisartan is not removed by hemodialysis.

Hydrochlorothiazide
The most common signs and symptoms observed in patients are those caused by electrolyte depletion (hypokalemia, hypochloremia, hyponatremia) and dehydration resulting from excessive diuresis. If digitalis has also been administered, hypokalemia may accentuate cardiac arrhythmias. The degree to which hydrochlorothiazide is removed by hemodialysis has not been established. The oral LD50 of hydrochlorothiazide is greater than 10 g/kg in both mice and rats.

List of Excipients: Micro Crystalline Cellulose, Meglumine, Sodium Hydroxide, Purified Water, Mannitol, Cros Povidone, Sodium Lauryl sulphate, Magnesium Stearate, Cross Carmellose Sodium, Kyron T-314, Colloidal Silicon Dioxide, Purified Talc & Red oxide of iron lake.

PRESENTATION: 3X10 Tablets in Alu Alu Blister

STORAGE INSTRUCTIONS : Store below 30°C. Protect from light & moisture.

Keep the medicine out of reach of children.

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