

## **1. NAME OF THE MEDICINAL PRODUCT**

Tenoretic 100 mg/25 mg film-coated tablets

## **2. QUALITATIVE AND QUANTITATIVE COMPOSITION**

Atenolol 100 mg  
Chlortalidone 25 mg

For the full list of excipients, see section 6.1.

## **3. PHARMACEUTICAL FORM**

Film-coated tablets.

White, round biconvex, film-coated, tablets which are intagliated with 100 25 on one face and bisected on the reverse face.

The score line is not intended for breaking the tablet.

## **4. CLINICAL PARTICULARS**

### **4.1 Therapeutic indications**

Management of hypertension.

### **4.2 Posology and method of administration**

#### **Posology**

##### **Adults**

One tablet daily. Most patients with hypertension will give a satisfactory response to a single tablet daily of Tenoretic. There is little or no further fall in blood pressure with increased dosage and, where necessary, another antihypertensive drug, such as a vasodilator, can be added.

##### **Elderly**

Dosage requirements are often lower in this age group.

##### **Paediatric population**

The use of Tenoretic is not recommended in children. The safety and efficacy of Tenoretic in children has not yet been established.

### **Renal Impairment**

Due to the properties of the chlortalidone component, Tenoretic tablets has reduced efficacy in the presence of renal insufficiency. This fixed dose combination should thus not be administrated to patients with severe renal impairment (see section 4.3).

### **Method of administration**

Tenoretic 100 mg/25 mg film-coated tablets are administered orally.

## **4.3 Contraindications**

Tenoretic tablets should not be used in the following:

- hypersensitivity to the active substances (or to sulphonamide derived medicinal products) or to any of the excipients listed in section 6.1;
- bradycardia;
- cardiogenic shock;
- hypotension;
- metabolic acidosis;
- severe peripheral arterial circulatory disturbances;
- second- or third-degree heart block;
- sick sinus syndrome;
- untreated phaeochromocytoma;
- severe renal failure;
- uncontrolled heart failure.

Tenoretic tablets must not be given during pregnancy or lactation.

## **4.4 Special warnings and precautions for use**

### **Due to its beta-blocker component Tenoretic tablets:**

- although contraindicated in uncontrolled heart failure (See section 4.3) may be used in patients whose signs of heart failure have been controlled. Caution must be exercised in patients whose cardiac reserve is poor.
- may increase the number and duration of angina attacks in patients with Prinzmetal's angina due to unopposed alpha receptor mediated coronary artery vasoconstriction. Atenolol is a beta<sub>1</sub>-selective beta-blocker; consequently the use of Tenoretic tablets may be considered although utmost caution must be exercised.
- although contraindicated in severe peripheral arterial circulatory disturbances (See section 4.3) may also aggravate less severe peripheral arterial circulatory disturbances.

- due to its negative effect on conduction time, caution must be exercised if it is given to patients with first-degree heart block.
- may modify warning signs of hypoglycaemia as tachycardia, palpitation and sweating.
- may mask the cardiovascular signs of thyrotoxicosis.
- will reduce heart rate, as a result of its pharmacological action. In the rare instances when a treated patient develops symptoms which may be attributable to a slow heart rate, the dose may be reduced.
- should not be discontinued abruptly in patients suffering from ischaemic heart disease.
- may cause a more severe reaction to a variety of allergens, when given to patients with a history of anaphylactic reaction to such allergens. Such patients may be unresponsive to the usual doses of adrenaline used to treat the allergic reactions.
- may cause a hypersensitivity reaction including angioedema and urticaria.
- patients with bronchospastic disease should, in general, not receive beta-blockers due to increasing in airways resistance. Atenolol is a beta<sub>1</sub>-selective beta-blocker; however this selectivity is not absolute. Therefore the lowest possible dose of Tenoretic tablets should be used and utmost caution must be exercised. If increased airways resistance does occur, Tenoretic tablets should be discontinued and bronchodilator therapy (e.g. salbutamol) administered if necessary.

The label and patient information leaflet for this product state the following warning:

“If you have ever had asthma or wheezing, do not take this medicine without first checking with your doctor”.

- systemic effects of oral beta-blockers may be potentiated when used concomitantly with ophthalmic beta-blockers.
- in patients with phaeochromocytoma must be administered only after alpha-receptor blockade. Blood pressure should be monitored closely.
- caution must be exercised when using anaesthetic agents with Tenoretic tablets. The anaesthetist should be informed and the choice of anaesthetic should be an agent with as little negative inotropic activity as possible. Use of beta-blockers with anaesthetic drugs may result in attenuation of the reflex tachycardia and

increase the risk of hypotension. Anaesthetic agents causing myocardial depression are best avoided.

**Due to its chlortalidone component:**

- plasma electrolyte should be periodically determined in appropriate intervals to detect possible electrolyte imbalance especially hypokalaemia and hyponatraemia.
- hypokalaemia and hyponatraemia may occur. Measurement of electrolytes is recommended, especially in the older patient, those receiving digitalis preparations for cardiac failure, those taking an abnormal (low in potassium) diet or those suffering from gastrointestinal complaints. Hypokalaemia may predispose to arrhythmias in patients receiving digitalis.
- impaired glucose tolerance may occur and diabetic patients should be aware of the potential for increased glucose levels. Close monitoring of glycaemia is recommended in the initial phase of therapy and in prolonged therapy test for glucosuria should be carried out at regular intervals.
- in patients with impaired hepatic function or progressive liver disease, minor alterations in fluid and electrolyte balance may precipitate hepatic coma.
- hyperuricaemia may occur. Only a minor increase in serum uric acid usually occurs but in cases of prolonged elevation, the concurrent use of a uricosuric agent will reverse the hyperuricaemia.
- Choroidal effusion, acute myopia and secondary angle-closure glaucoma:

Sulfonamide or sulfonamide derivative drugs can cause an idiosyncratic reaction resulting in choroidal effusion with visual field defect, 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 drug intake 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.

**Sodium Content**

This medicine contains less than 1 mmol sodium (23 mg) per tablet, that it is to say essentially ‘sodium-free’.

## 4.5 Interaction with other medicinal products and other forms of interaction

### **Due to atenolol:**

Combined use of beta-blockers and calcium channel blockers with negative inotropic effects e.g. verapamil, diltiazem, can lead to an exaggeration of these effects particularly in patients with impaired ventricular function and/or sino-atrial or atrio-ventricular conduction abnormalities. This may result in severe hypotension, bradycardia and cardiac failure. Neither the beta-blocker nor the calcium channel blocker should be administered intravenously within 48 hours of discontinuing the other.

Class I anti-arrhythmic drugs (e.g. disopyramide) and amiodarone may have a potentiating effect on atrial-conduction time and induce negative inotropic effect.

Digitalis glycosides, in association with beta-blockers, may increase atrio-ventricular conduction time.

Beta-blockers may exacerbate the rebound hypertension which can follow the withdrawal of clonidine. If the two drugs are co-administered, the beta-blocker should be withdrawn several days before discontinuing clonidine. If replacing clonidine by beta-blocker therapy, the introduction of beta-blockers should be delayed for several days after clonidine administration has stopped.

Concomitant use of sympathomimetic agents, e.g. adrenaline (epinephrine), may counteract the effect of beta-blockers.

Concomitant use of prostaglandin synthetase inhibiting drugs (e.g. ibuprofen, indometacin) may decrease the hypotensive effects of beta-blockers

Caution must be exercised when using anaesthetic agents with Tenoretic tablets (see section 4.4).

### **Due to Chlortalidone:**

The chlortalidone component may reduce the renal clearance of lithium leading to increased serum concentrations. Dose adjustments of lithium may therefore be necessary.

Concomitant use with insulin and oral antidiabetic drugs may lead to the intensification of the blood sugar lowering effects of these drugs.

### **Due to the combination product:**

Concomitant therapy with dihydropyridines e.g. nifedipine, may increase the risk of hypotension, and cardiac failure may occur in patients with latent cardiac insufficiency.

Concomitant use of baclofen may increase the antihypertensive effect making dose adjustments necessary.

#### 4.6 Fertility, pregnancy and lactation

**Fertility:**

No data on fertility available.

**Pregnancy:**

Tenoretic tablets must not be given during pregnancy.

**Lactation:**

Tenoretic tablets must not be given during lactation.

#### 4.7 Effects on ability to drive and use machines

Use is unlikely to result in any impairment of the ability of patients to drive or use machinery. However, it should be taken into account that occasionally dizziness or fatigue may occur.

#### 4.8 Undesirable effects

**Tabulated list of adverse reactions**

Tenoretic tablets are well tolerated. In clinical studies, the undesired events reported are usually attributable to the pharmacological actions of its components.

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 ( $\geq 1/1,000$  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).

| <u>System Organ Class</u>            | <u>Frequency</u> | <u>Adverse Drug Reaction</u>                                     |
|--------------------------------------|------------------|--|
| Blood and lymphatic system disorders | Rare             | Purpura, thrombocytopenia, leucopenia (related to chlortalidone) |
| Psychiatric disorders                | Uncommon         | Sleep disturbances of the type noted with other beta blockers    |

|   |           |  |
|---|-----------|--|
|   | Rare      | Mood changes, nightmares, confusion, psychoses and hallucinations  |
| Nervous system disorders                        | Rare      | Dizziness, headache, paraesthesia  |
|   | Not known | Depression   |
| Eye disorders                                   | Rare      | Dry eyes, visual disturbances  |
|   | Not known | Choroidal effusion   |
| Cardiac disorders                               | Common    | Bradycardia  |
|   | Rare      | Heart failure deterioration, precipitation of heart block  |
| Vascular disorders                              | Common    | Cold extremities   |
|   | Rare      | Postural hypotension which may be associated with syncope, intermittent claudication may be increased if already present, in susceptible patients Raynaud's phenomenon |
| Respiratory, thoracic and mediastinal disorders | Rare      | Bronchospasm may occur in patients with bronchial asthma or a history of asthmatic complaints  |
| Gastrointestinal disorders                      | Common    | Gastrointestinal disturbances (including nausea related to chlortalidone)  |
|   | Rare      | Dry mouth  |
|   | Not known | Constipation   |
| Hepatobiliary disorders                         | Rare      | Hepatic toxicity including intrahepatic cholestasis, pancreatitis (related to chlortalidone)   |

|  |           |  |
|--|-----------|--|
| Skin and subcutaneous tissue disorders               | Rare      | Alopecia, psoriasiform skin reaction, exacerbation of psoriasis, skin rashes                                       |
|  | Not known | Hypersensitivity reactions, including angioedema and urticaria   |
| Musculoskeletal and connective tissue disorders      | Not known | Lupus-like syndrome  |
| Reproductive system and breast disorders             | Rare      | Impotence  |
| General disorders and administration site conditions | Common    | Fatigue  |
| Investigations                                       | Common    | Related to chlortalidone:<br>Hyperuricaemia, hyponatraemia, hypokalaemia, impaired glucose tolerance               |
|  | Uncommon  | Elevations of transaminase levels.   |
|  | Very rare | An increase in ANA (Antinuclear Antibodies) has been observed, however the clinical relevance of this is not clear |

Cases of choroidal effusion with visual field defect have been reported after the use of thiazide and thiazide-like diuretics.

Discontinuance of Tenoretic tablets should be considered if, according to clinical judgement, the well-being of the patient is adversely affected by any of the above reactions.

### **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 the Yellow Card Scheme. Website:

[www.mhra.gov.uk/yellowcard](http://www.mhra.gov.uk/yellowcard) or search for MHRA Yellow Card in the Google Play or Apple App Store.

## 4.9 Overdose

The symptoms of overdosage may include bradycardia, hypotension, acute cardiac insufficiency and bronchospasm.

General treatment should include: close supervision, treatment in an intensive care ward, the use of gastric lavage, activated charcoal and a laxative to prevent absorption of any drug still present in the gastrointestinal tract, the use of plasma or plasma substitutes to treat hypotension and shock. The possible use of haemodialysis or haemoperfusion may be considered.

Excessive bradycardia may be countered with atropine 1-2 mg intravenously and/or a cardiac pacemaker. If necessary, this may be followed by a bolus dose of glucagon 10 mg intravenously. If required, this may be repeated or followed by an intravenous infusion of glucagon 1-10 mg/hour depending on response. If no response to glucagon occurs or if glucagon is unavailable, a beta-adrenoceptor stimulant such as dobutamine 2.5 to 10 micrograms/kg/minute by intravenous infusion may be given. Dobutamine, because of its positive inotropic effects could be used to treat hypotension and acute cardiac insufficiency. It is likely that these doses would be inadequate to reverse the cardiac effects of beta-blocker blockade if a large overdose has been taken. The dose of dobutamine should therefore be increased if necessary to achieve the required response according to the clinical condition of the patient.

Bronchospasm can usually be reversed by bronchodilators.

Excessive diuresis should be countered by maintaining normal fluid and electrolyte balance.

## 5. PHARMACOLOGICAL PROPERTIES

### 5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Beta-blocking agents, selective, and other diuretics.  
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Tenoretic tablets combines the antihypertensive activity of two agents, a beta-blocker (atenolol) and a diuretic (chlortalidone).

#### **Atenolol**

Atenolol is beta<sub>1</sub>-selective (i.e. acts preferentially on beta<sub>1</sub>-adrenergic receptors in the heart). Selectivity decreases with increasing dose.

Atenolol is without intrinsic sympathomimetic and membrane-stabilising activities and, as with other beta-adrenoceptor blocking drugs, has negative inotropic effects (and is therefore contraindicated in uncontrolled heart failure).

As with other beta-blockers, the mode of action in the treatment of hypertension is unclear.

It is unlikely that any additional ancillary properties possessed by S (-) atenolol, in comparison with the racemic mixture, will give rise to different therapeutic effects.

Atenolol is effective and well-tolerated in most ethnic populations. Black patients respond better to the combination of atenolol and chlortalidone, than to atenolol alone.

The combination of atenolol with thiazide-like diuretics has been shown to be compatible and generally more effective than either drug used alone.

### **Chlortalidone**

Chlortalidone, a monosulfonamyl diuretic, increases excretion of sodium and chloride. Natriuresis is accompanied by some loss of potassium. The mechanism by which chlortalidone reduces blood pressure is not fully known but may be related to the excretion and redistribution of body sodium.

## **5.2 Pharmacokinetic properties**

### **Atenolol**

Absorption of atenolol following oral dosing is consistent but incomplete (approximately 40-50%) with peak plasma concentrations occurring 2-4 hours after dosing. The atenolol blood levels are consistent and subject to little variability. There is no significant hepatic metabolism of atenolol and more than 90% of that absorbed reaches the systemic circulation unaltered. The plasma half-life is about 6 hours but this may rise in severe renal impairment since the kidney is the major route of elimination. Atenolol penetrates tissues poorly due to its low lipid solubility and its concentration in brain tissue is low. Plasma protein binding is low (approximately 3%).

### **Chlortalidone**

Absorption of chlortalidone following oral dosing is consistent but incomplete (approximately 60%) with peak plasma concentrations occurring about 12 hours after dosing. The chlortalidone blood levels are consistent and subject to little variability. The plasma half-life is about 50 hours and the kidney is the major route of elimination. Plasma protein binding is high (approximately 75%).

Coadministration of chlortalidone and atenolol has little effect on the pharmacokinetics of either.

Tenoretic tablets is effective for at least 24 hours after a single oral daily dose. This simplicity of dosing facilitates compliance by its acceptability to patients.

### **5.3 Preclinical safety data**

Atenolol and chlortalidone are drugs on which extensive clinical experience has been obtained. Relevant information for the prescriber is provided elsewhere in the Summary of Product Characteristics.

## **6. PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

Heavy Magnesium Carbonate  
Maize Starch  
Sodium laurilsulfate  
Gelatin  
Magnesium Stearate  
Methylhydroxypropylcellulose  
Glycerol (E422)  
Titanium dioxide  
Magnesium Carbonate

### **6.2 Incompatibilities**

Not applicable.

### **6.3 Shelf-life**

2 years.

### **6.4 Special precautions for storage**

Store below 30°C. Protect from light and moisture.

### **6.5 Nature and contents of container**

Blister packs of 28 tablets contained in a carton.

### **6.6 Special precautions for disposal**

No special requirements for disposal.

**7.           MARKETING AUTHORISATION HOLDER**

Atnahs Pharma UK Limited.  
Sovereign House  
Miles Gray Road  
Basildon, Essex  
SS14 3FR  
United Kingdom.

**8.           MARKETING AUTHORISATION NUMBER(S)**

1093

**9.           DATE OF FIRST AUTHORISATION/RENEWAL OF  
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01/2026

**10.          DATE OF REVISION OF THE TEXT**

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