

## Summary of Product Characteristics

### 1 NAME OF THE MEDICINAL PRODUCT

Genticin 0.3% w/v Eye/Ear Drops, Solution.

### 2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each bottle contains gentamicin sulphate equivalent to 0.3% w/v gentamicin base in 10 ml of solution.

Excipients with known effect:

Benzalkonium chloride 0.02% w/v.

For the full list of excipients, see section 6.1.

### 3 PHARMACEUTICAL FORM

Eye/Ear drops, solution.

A clear colourless liquid.

### 4 CLINICAL PARTICULARS

#### 4.1 Therapeutic Indications

Genticin eye/ear drops are indicated in adults and children:

1. For the treatment of superficial eye and ear infections caused by organisms sensitive to gentamicin.
2. For prophylaxis against infection in trauma of the eye or ear.

#### 4.2 Posology and method of administration

##### Posology

*Adults, the elderly and the paediatric population*

*Eyes:* 1 or 2 drops should be instilled in the affected eye up to six times a day, or more frequently if required. (Severe infections may require 1 or 2 drops every fifteen to twenty minutes initially, reducing the frequency of instillation gradually as the infection is controlled).

*Ears:* The area should be cleaned and 2 - 3 drops instilled in the affected ear three to four times a day and at night, or more frequently if required.

##### Method of administration

Auricular and ocular use.

#### 4.3 Contraindications

Hypersensitivity to the active substance or to any of the excipients listed in section 6.1

Myasthenia gravis

Known or suspected perforation of the ear drum.

#### 4.4 Special warnings and precautions for use

Long-term continuous topical therapy should be avoided. Prolonged use may lead to skin sensitisation and the emergence of resistant organisms. Cross sensitivity with other aminoglycoside antibiotics may occur.

In severe infections, topical use of gentamicin should be supplemented with appropriate systemic antibiotic treatment.

Gentamicin may cause irreversible partial or total deafness when given systemically or when applied topically to open wounds or damaged skin. This effect is dose-related and is enhanced by renal and/or hepatic impairment and is more likely in the elderly.

The condition of the ear drum must always be checked before this medicinal product is prescribed. The medicinal product must not be used if the integrity of the ear drum cannot be guaranteed.

Irreversible toxic effects may result from direct contact of gentamicin with the middle and inner ear. The benefits of gentamicin therapy should be considered against the risk of infection itself causing hearing loss.

Contact lenses should be removed during the period of treatment of ocular infections.

Serious adverse reactions including neurotoxicity, ototoxicity and nephrotoxicity have occurred in patients receiving systemic gentamicin therapy. Although these effects have not been reported following topical otic use of gentamicin, caution is advised when used concomitantly with systemic aminoglycosides.

##### Genticin eye/ear drops contain benzalkonium chloride

For ocular use: May cause eye irritation. Avoid contact with soft lenses. Remove contact lenses prior to application and wait at least 15 minutes before reinsertion. Known to discolour soft contact lenses.

For auricular use: Irritant, may cause skin reactions.

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

Potent diuretics such as ethacrynic acid and furosemide are believed to enhance any risk of ototoxicity whilst amphotericin B, cisplatin and cyclosporine and cephalosporins are potential enhancers of nephrotoxicity.

Concurrent use with other potentially nephrotoxic or ototoxic drugs should be avoided unless considered essential by the physician.

Neuromuscular blockade and respiratory paralysis have been reported in patients from the administration of aminoglycosides to patients who have received curare-type muscle relaxants during anaesthesia.

#### 4.6 Fertility, pregnancy and lactation

##### Pregnancy

Safety for use in pregnancy has not been established. Gentamicin should only be used in pregnancy when considered essential by the physician, after careful assessment of the potential risks and benefits.

##### Breast-feeding

Safety for use in lactation has not been established. In the absence of gastrointestinal inflammation the amount of gentamicin ingested from the milk is unlikely to result in significant blood levels in breast-fed infants. Gentamicin should only be used in lactation when considered essential by the physician, after careful assessment of the potential risks and benefits.

4.7 Effects on ability to drive and use machines

Patients should be advised that the use of Gentacin eye/ear drops in the eye may cause transient blurring of vision. If affected, patients should not drive or operate machinery until vision has cleared.

4.8 Undesirable effects

Eye disorders	-local sensitivity: -blurred vision -eye irritation -burning sensation -stinging sensation -itching(eye pruritus)
Ear and labyrinth disorders	-local sensitivity -ototoxicity -vestibular disorder: -hearing loss
Skin and subcutaneous tissue disorders	-irritation -burning sensation -stinging -itching (pruritus): -dermatitis.
Renal and urinary disorders	-nephrotoxicity* -acute renal failure

\*Gentamicin may cause nephrotoxicity when given systemically. However, it is likely that systemic absorption following topical administration does not constitute a comparable risk.

In the event of irritation, sensitisation or super-infection, treatment should be discontinued and appropriate therapy instituted.

Very rarely, cases of dizziness, tinnitus, hypersensitivity and allergic reaction have been reported.

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 HPRA Pharmacovigilance, Earlsfort Terrace, IRL - Dublin 2; Tel: +353 1 6764971; Fax: +353 1 6762517. Website: [www.hpra.ie](http://www.hpra.ie); E-mail: [medsafety@hpra.ie](mailto:medsafety@hpra.ie).

4.9 Overdose

Symptoms

The oral ingestion of the contents of one bottle is unlikely to cause any significant adverse effect.

Management

Haemodialysis and peritoneal dialysis will aid the removal from blood but the former is probably more efficient. Calcium salts given intravenously have been used to counter the neuromuscular blockade cause by gentamicin.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

ATC code: S03AA06

Pharmacotherapeutic group: Bactericidal

### Mechanism of action

Gentamicin is mixture of antibiotic substances produced by the growth of micromonospora purpurea. It is a bactericidal antibiotic which acts by inhibiting protein synthesis. It has greater antibacterial activity than streptomycin, neomycin or kanamycin.

Gentamicin exerts a number of effects on cells of susceptible bacteria. It affects the integrity of the plasma membrane and the metabolism of RNA, but it's most important effect is inhibition of protein synthesis at the level of the 30s ribosomal subunit.

## **5.2 Pharmacokinetic properties**

### Absorption

Topical application of gentamicin can result in some systemic absorption. Treatment of large areas can result in plasma concentrations of up to 1µg/ml.

Gentamicin is 70-85% bound to plasma albumin following administration.

Effective plasma concentration is 4 - 8ug/ml

The volume of distribution ( $V_D$ ) is 0.3 l/kg

### Elimination

> 90% Gentamicin is excreted unchanged in the urine by glomerular filtration.

$T_{1/2}$  = 2 - 3 hours in individuals with normal kidney function, but can be increased in cases of renal insufficiency.

The elimination rate constant is;

0.02 Hr<sup>-1</sup> for anuric patients\*

0.30 Hr<sup>-1</sup> normal

\*Therefore in those with anuria care must be exercised.

## **5.3 Preclinical safety data**

Not relevant.

## **6 PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

Benzalkonium chloride

Borax (E285)

Sodium chloride

Water, purified

### **6.2 Incompatibilities**

Not applicable.

### **6.3 Shelf life**

3 years. Discard contents 4 weeks after opening.

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

Do not store above 25°C. Do not freeze.

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

10ml opaque LDPE bottles with closures comprising polythene plug droppers and HDPE tamper evident caps.

#### **6.6 Special precautions for disposal and other handling**

No special requirements.

### **7 MARKETING AUTHORISATION HOLDER**

Amdipharm Limited  
Temple Chambers  
3 Burlington Road  
Dublin 4  
Ireland

### **8 MARKETING AUTHORISATION NUMBER**

PA1142/013/002

### **9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION**

Date of first authorization: 20 April 1995

Date of last renewal: 20 April 2010

### **10 DATE OF REVISION OF THE TEXT**

December 2014