

SUMMARY OF PRODUCT CHARACTERISTICS

1 NAME OF THE MEDICINAL PRODUCT

Nivemycin Tablets 500mg
Neomycin 500mg Tablets

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Neomycin sulphate Ph Eur.
an amount equivalent to 550mg of material having a potency of 700 units per mg.

For the full list of excipients, see section 6.1

3 PHARMACEUTICAL FORM

Tablets.

4 CLINICAL PARTICULARS

4.1 Therapeutic Indications

Neomycin tablet (neomycin sulphate BP) is indicated for pre-operative sterilisation of the bowel and may be useful in the treatment of impending hepatic coma, including portal systemic encephalopathy.

For oral administration.

4.2 Posology and method of administration

Posology

Pre-operative sterilisation of the bowel.

Adults: 2 tablets every hour for 4 hours; then 2 tablets every 4 hours for two or three days before the operation.

Paediatric population

Children over 12 years: 2 tablets every 4 hours for 2 or 3 days before the operation.

Children from 6 to 12 years: ½ to 1 tablet every 4 hours for 2 or 3 days before the operation.

For practical reasons, use of the tablets in children under 6 years is not recommended.

Hepatic impairment

In hepatic coma, the adult dose is 4-12 gm/day in divided doses for a period of 5-7 days, whilst for children, 50-100mg/kg/day in divided doses appears appropriate. Chronic hepatic insufficiency may require up to 4gm/day over an indefinite period.

Elderly

The elderly dose is the same as for adults.

Method of administration

For oral use

4.3 Contraindications

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

Neomycin tablets should not be given when intestinal obstruction is present.

Hypersensitivity to aminoglycosides.

Infants under 1 year.

Myasthenia gravis

4.4 Special warnings and precautions for use

The absorption of neomycin is poor from the alimentary tract, with about 97% of an orally administered dose being excreted unchanged in the faeces. Impaired G.I. motility however may increase absorption of the drug and it is therefore possible, as with other broad spectrum antibiotics, that prolonged therapy could result in ototoxicity and nephrotoxicity, particularly in patients with a degree of renal failure. In such patients, and infants and the elderly, it is generally desirable to determine dosage requirements of aminoglycosides by individual monitoring. Some authorities consider that monitoring is also important in obese patients and those with cystic fibrosis.

Impaired hepatic function or auditory function, bacteraemia, fever, and possibly exposure to loud noises have been reported to increase the risk of ototoxicity, while volume depletion or hypotension, liver disease, or female sex have reported as additional risk factors for nephrotoxicity. Regular assessment of auditory, vestibular and renal function is particularly necessary in patients with additional risk factors.

There have been observed cases of an increased risk of ototoxicity with aminoglycosides administered to patients with mitochondrial mutations, particularly the m.1555A>G mutation, including cases where the patient's aminoglycoside serum levels were within the recommended range. Some cases were associated with a maternal history of deafness and/or mitochondrial mutation. While no cases were

identified with neomycin, based on a shared mechanism of action there is the potential for a similar effect with neomycin. These mitochondrial mutations are rare, and the penetrance of this observed effect is unknown.

When used as an adjunct in the management of hepatic coma, care should be taken that administration is of the minimal period necessary, since prolonged exposure to the drug may result in malabsorption.

Neomycin should be used with caution in patients with neuromuscular disorders and Parkinsonism.

There is almost complete cross-resistance between neomycin, kanamycin, paromomycin and framycetin. Cross-resistance with gentamicin has also been reported.

Since prolonged therapy may result in the overgrowth of non-sensitive organisms, treatment should not be continued longer than necessary to prevent super infection due to the over growth of non-sensitive organisms.

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

Neomycin may impair absorption of other drugs including phenoxymethylpenicillin, digoxin, methotrexate and some vitamins. Aminoglycosides exhibit synergistic activity with a number of beta lactams, but aminoglycoside activity was reported to be diminished in a few patients with severe renal impairment.

Care should be taken when considering the use of neomycin concurrently with drugs with a potential to cause nephrotoxicity (including other aminoglycosides, some of the cephalosporins, amphotericin, ciclosporin, capreomycin, polymixins, platinum compounds, teicoplanin and vancomycin) or ototoxicity (including loop diuretics, capreomycin, teicoplanin, vancomycin and possibly platinum compounds).

The effect of non-depolarising muscle relaxants may be enhanced by aminoglycosides. Care is required if other drugs with a neuromuscular blocking action, including botulinum toxic, are given concomitantly. Care is required when patients being treated with aminoglycosides are to receive a general anaesthetic or opioids in order to avoid the possible neuromuscular side-effects provoking severe respiratory depression.

The effect of the parasympathomimetic drugs neostigmine and pyridostigmine, may be antagonised by aminoglycosides.

The hypoglycaemic effect of acarbose may be enhanced by neomycin and the severity of gastrointestinal side effects increased.

Aminoglycosides may increase the risk of hypocalcaemia in patients receiving bisphosphonates.

Experience in anticoagulant clinics suggests that INR (International Normalised Ratio) may be altered by antibacterials such as neomycin given for local action on the gut.

The efficacy of oral contraceptives may be reduced with broad spectrum antibiotics.

Oral typhoid vaccine is inactivated by concomitant antibiotic administration.

4.6 Fertility, pregnancy and lactation

Pregnancy

The use of neomycin in pregnancy is not recommended unless the benefits outweigh the potential risks.

There are no reports linking the use of neomycin to congenital defects. However, small amounts of the drug are absorbed when given orally and neomycin and other aminoglycosides may have harmful effects on the foetus following oral absorption during pregnancy.

Breast-feeding

In some circumstances neomycin may enter the breast milk of lactating mothers. There is little risk of ototoxicity in the infant, but abnormal development of the gut flora may occur. The use of neomycin in lactating mothers is not recommended unless the benefits outweigh the potential risks.

Fertility

No data available

4.7 *Effects on ability to drive and use machines*

Not applicable.

4.8 Undesirable effects

Adverse reactions are listed as per System Organ Class. The following adverse reactions have been observed at the frequencies defined using Not known frequency (cannot be estimated from the available data).

System organ class	Undesirable effects
Infections and infestations	superinfection may occur, especially with prolonged oral treatment
Blood and lymphatic system disorders	blood disorder haemolytic anaemia
Immune system disorders	hypersensitivity reactions including dermatitis, pruritus, pyrexia and anaphylactic reaction.
Metabolism and nutrition disorders	*electrolyte imbalance
Nervous system disorders	confusion paraesthesia disorientation nystagmus,
Ear and labyrinth disorders	Ototoxicity

Gastrointestinal disorders	nausea vomiting diarrhoea salivary hypersecretion stomatitis **malabsorption syndrome with steatorrhoea and diarrhoea
Renal and urinary disorders	nephropathy toxic
Investigation	hepatic enzyme increased blood bilirubin increased

Cross sensitivity reaction with other aminoglycosides may occur.

*notably hypomagnesaemia but also hypocalcaemia and hypokalaemia have occurred with other aminoglycosides.

**which can be severe, may be caused by prolonged oral therapy.

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 or search for MHRA Yellow Card in the Google Play or Apple App Store

4.9 Overdose

Symptoms

In overdose, exacerbation of the adverse events reported for neomycin (nausea, diarrhoea nephrotoxicity, ototoxicity etc.) is expected.

Management

Monitor renal and auditory function. If these are impaired, haemodialysis is indicated. Prolonged assisted ventilation may also be required.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: aminoglycoside antibiotic, ATC code: A07AA01

Mechanism of action

Neomycin acts by binding to polysomes, inhibiting protein synthesis and generating errors in the transcription of the genetic code.

5.2 Pharmacokinetic properties

Absorption

The absorption of neomycin from the alimentary tract is poor: Only 3% of an oral dose is absorbed,

Oral doses of 3g produce peak plasma concentrations of up to 4 µg/ml.

Elimination

Neomycin is rapidly excreted by the kidneys in the unchanged form. The plasma half-life in healthy adults is approximately 2-3 hours.

5.3 *Preclinical safety data*

Not applicable.

6 PHARMACEUTICAL PARTICULARS

6.1 *List of excipients*

Plasdone K29-32
Isopropyl alcohol
Calcium stearate.

6.2 *Incompatibilities*

Not applicable.

6.3 *Shelf life*

3 years.

6.4 Special precautions for storage

Store below 30°C in a dry place in order to protect from light.

6.5 *Nature and contents of container*

An amber glass bottle having a tin-plate screw cap with a waxed aluminium-faced pulpboard liner. The ullage is filled with cotton wool.

Pack size: 100 tablets.

6.6 Special precautions for disposal

Any unused medicinal product or waste material should be disposed of in accordance with local requirements

7 MARKETING AUTHORISATION HOLDER

Amdipharm UK Limited
Dashwood House,
69 Old Broad Street,
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8 MARKETING AUTHORISATION NUMBER(S)

PL 20072/0223

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation : 11th January 1999

Date of latest renewal : 01st April 2004

10 DATE OF REVISION OF THE TEXT

15/01/2024