SUMMARY OF PRODUCT CHARACTERISTICS

1. Name of the medicinal product
SANCEPH -500 CAP
Cephalexin Capsules USP 500mg

2. Qualitative and quantitative composition
Label Claim:
Each hard gelatin capsule contains:
Cephalexin monohydrate USP equivalent to anhydrous Cephalexin 500mg

3. Pharmaceutical form
Hard Gelatin Capsule.
Description: Green/White coloured hard gelatin capsules of size '0' containing white to off white coloured powder.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications
Cephalexin is a semisynthetic cephalosporin antibiotic for oral administration.
Cephalexin is indicated in the treatment of the following infections due to susceptible micro-organisms:
Respiratory tract infections
Otitis media
Skin and soft tissue infections
Bone and joint infections
Genito-urinary tract infections, including acute prostatitis
Dental infections

4.2 Posology and method of administration
Cephalexin is administered orally.
Adults: The adult dosage ranges from 1-4g daily in divided doses; most infections will respond to a dosage of 500mg every 8 hours. For skin and soft tissue infections, streptococcal pharyngitis, and mild, uncomplicated urinary tract infections, the usual dosage is 250mg every 6 hours or 500 mg every 12 hours.
For more severe infections or those caused by less susceptible organisms, larger doses may be needed. If daily doses of Cephalexin greater than 4g are required, parenteral cephalosporins, in appropriate doses, should be considered.
The elderly and patients with impaired renal function: As for adults. Reduce dosage if renal function is markedly impaired (see section 4.4, 'Special warnings and precautions for use').
Children: The usual recommended daily dosage for children is 25-50mg/kg (10-20mg/lb) in divided doses. For skin and soft tissue infections, streptococcal pharyngitis and mild, uncomplicated urinary tract infections, the total daily dose may be divided and administered every 12 hours. For most infections the following schedule is suggested:

Children under 5 years:	125mg every 8 hours.
Children 5 years and over:	250mg every 8 hours

In severe infections, the dosage may be doubled. In the therapy of otitis media, clinical studies have shown that a dosage of 75 to 100mg/kg/day in 4 divided doses is required.

In the treatment of beta-haemolytic streptococcal infections, a therapeutic dose should be administered for at least 10 days.

4.3 Contraindications

Cephalexin is contra-indicated in patients with known allergy to the cephalosporin group of antibiotics.

4.4 Special warnings and special precautions for use

Before instituting therapy with Cephalexin, every effort should be made to determine whether the patient has had previous hypersensitivity reactions to the cephalosporins, penicillins, or other medicinal products. Cephalexin should be given cautiously to penicillin-sensitive patients. There is some clinical and laboratory evidence of partial cross-allergenicity of the penicillins and cephalosporins. Patients have had severe reactions (including anaphylaxis) to both medicinal products.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics, including macrolides, semi-synthetic penicillins, and cephalosporins. It is important, therefore, to consider its diagnosis in patients who develop diarrhoea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening. Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, appropriate measures should be taken.

If an allergic reaction to Cephalexin occurs, the drug should be discontinued and the patient treated with the appropriate agents.

Prolonged use of Cephalexin may result in the overgrowth of non-susceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Cephalexin should not be used in infections in which *Haemophilus influenzae* is, or is likely to be, implicated.

Cephalexin should be administered with caution in the presence of markedly impaired renal function. Careful clinical and laboratory studies should be made because safe dosage may be lower than that usually recommended. If dialysis is required for renal failure, the daily dose of Cephalexin should not exceed 500mg.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In haematological studies, or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side, or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

A false positive reaction for glucose in the urine may occur with Benedict's or Fehling's solutions, or with copper sulphate test tablets.

Acute generalised exanthematous pustulosis (AGEP) has been reported in association with cephalexin treatment. At the time of prescription patients should be advised of the signs and symptoms and monitored closely for skin reactions. If signs and symptoms suggestive of these reactions appear, Keflex should be withdrawn immediately and an alternative treatment considered. Most of these reactions occurred most likely in the first week during treatment.

4.5 Interaction with other medicinal products and other forms of interaction

As with other beta-lactam drugs, renal excretion of cephalexin is inhibited by probenecid.

In healthy subjects given single 500mg doses of cephalexin and metformin, plasma metformin Cmax and AUC increased by an average of 34% and 24%, respectively, and metformin renal clearance decreased by an average of 14%. No information is available about the interaction of cephalexin and metformin following multiple dose administration.
Hypokalaemia has been described in patient taking cytotoxic drugs for leukaemia when they were given gentamicin and cephalexin.

4.6Fertlity, Pregnancy and lactation

Usage in pregnancy: Although laboratory and clinical studies have shown no evidence of teratogenicity, caution should be exercised when prescribing for the pregnant patient.
Usage in nursing mothers: The excretion of cephalexin in human breast milk increased up to 4 hours following a 500mg dose. The drug reached a maximum level of 4 micrograms/ml, then decreased gradually and had disappeared 8 hours after administration. Caution should be exercised when cephalexin is administered to a nursing woman, since the neonate is presented with the risk of candidiasis and CNS toxicity due to immaturity of the blood-brain barrier. There is a theoretical possibility of later sensitisation.

4.7 Effects on ability to drive and use machines

Cephalexin has no known influence on the ability to drive and use machines.

4.8 Undesirable effects

Gastro-intestinal: Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely. The most frequent side-effect has been diarrhoea. It was very rarely severe enough to warrant cessation of therapy. Dyspepsia and abdominal pain have also occurred. As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
Hypersensitivity: Allergic reactions have been observed in the form of rash, urticaria, angioedema and, rarely, erythema multiforme, Stevens-Johnson syndrome and toxic epidermal necrolysis. These reactions usually subsided upon discontinuation of the drug, although in some cases supportive therapy may be necessary. Anaphylaxis has also been reported.
Haemic and Lymphatic System: Eosinophilia, neutropenia, thrombocytopenia, and haemolytic anaemia have been reported. Skin and subcutaneous tissue disorders: Acute generalised exanthematous pustulosis (AGEP) has been reported with unknown frequency.
Other: These have included genital and anal pruritus, genital candidiasis, vaginitis and vaginal discharge, dizziness, fatigue, headache, agitation, confusion, hallucinations, arthralgia, arthritis and joint disorder. Reversible interstitial nephritis has been reported rarely. Slight elevations in AST and ALT have been reported.

4.9 Overdose

Symptoms of oral overdose may include nausea, vomiting, epigastric distress, diarrhoea, and haematuria.
In the event of severe overdosage, general supportive care is recommended, including close clinical and laboratory monitoring of haematological, renal, and hepatic functions, and coagulation status until the patient is stable. Forced diuresis, peritoneal dialysis, haemodialysis, or charcoal haemoperfusion have not been established as beneficial for an overdose of Cephalexin. It would be extremely unlikely that one of these procedures would be indicated.
Unless 5 to 10 times the normal total daily dose has been ingested, gastro-intestinal decontamination should not be necessary.

There have been reports of haematuria, without impairment of renal function, in children accidentally ingesting more than 3.5g of Cephalexin in a day. Treatment has been supportive (fluids) and no squeal have been reported.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: First generation cephalosporins

ATC code: J01DB01

In vitro tests demonstrate that cephalosporins are bactericidal because of their inhibition of cell wall synthesis.

Cephalexin is active against the following organisms in vitro:

Beta-haemolytic streptococci

Staphylococci, including coagulase-positive, coagulase-negative and penicillinase-producing strains

Streptococcus pneumoniae

Escherichia coli

Proteus mirabilis

Klebsiella species

Haemophilus influenzae

Branhamella catarrhalis

Most strains of enterococci (Streptococcus faecalis) and a few strains of staphylococci are resistant to cephalexin. It is not active against most strains of Enterobacter species, Morganella morganii and Pr. vulgaris. It has no activity against Pseudomonas or Herellea species or Acinetobacter calcoaeticus. Penicillin-resistant Streptococcus pneumoniae is usually cross resistant to beta lactam antibiotics. When tested by in vitro methods, staphylococci exhibit cross-resistance between cephalexin and methicillin-type antibiotics.

5.2 Pharmacokinetic properties

Cephalexin is acid stable. Cephalexin is almost completely absorbed from the gastro-intestinal tract, and 75-100% is rapidly excreted in active form in the urine. Absorption is slightly reduced if the drug is administered with food. The half-life is approximately 60 minutes in patients with normal renal function. Haemodialysis and peritoneal dialysis will remove cephalexin from the blood.

Peak blood levels are achieved one hour after administration, and therapeutic levels are maintained for 6-8 hours. Approximately 80% of the active drug is excreted in the urine within 6 hours. No accumulation is seen with dosages above the therapeutic maximum of 4g/day.

The half-life may be increased in neonates due to their renal immaturity, but there is no accumulation when given at up to 50mg/kg/day.

5.3 Preclinical safety data

There are no pre-clinical data of relevance to the prescriber which are additional to that already included in other sections of the SPC.

6. Pharmaceutical particulars

6.1 List of excipients

Lactose Anhydrous

Magnesium stearate

Croscarmellose sodium
Magnesium stearate
Empty Capsule – Size 0

6.2 Incompatibilities

Not applicable

6.3 Shelf life

36 months

6.4 Special precautions for storage

Store at temperature below 30^0C, protect from light

6.5 Nature and contents of container

Carton containing ALU PVC blisters of 10 x 10 capsules and leaflet

6.6 Special precautions for disposal and other handling

No special requirements

7. Marketing authorisation holder

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8. Marketing authorisation number(s) : 07681/08447/REN/2022

9. Date of first authorisation/renewal of the authorization :

Date of renewal: 08/08/2022

10. Date of Revision of the text: 30/06/2023