Otsuka Otsuka Pharmaceutical India Private Limited

Artwork Code : XXXXXXXXXX-XX	**Artwork Req. No: -**
Quality of Paper/Board : Super Sun Shine	**Size of Artwork (In mm) : 210x266**
Quality of Gum :	**GSM of Paper/Board : 60 GSM**
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Barcode Information:	
Barcode Scan Report:	
Packing: 100ml N. PVC bag plumat & PLB	**Plant Location : MF 02**
Country: Malaysia	**Language : English, Malay**
Ref. Code Creation/Blockage Note:	**Artwork Control Key No.:**
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14. INSTRUCTION FOR HANDLING THE PLASTIC BOTTLE / NON PVC BAG

For Plastic Bottle

Instructions for use:

Opening

- Remove the container from the overwrap pouch just before use.
- Check for minute leaks by squeezing bottle firmly. If leaks are found, discard Solution, as sterility may be impaired.
- Check solution for limpidity and absence of foreign matter. If solution is not clear or contains foreign matter, discard the solution.

Preparation for administration:

Use sterile material for preparation and administration.

- Hang container on IV bottle stand through hang hole support.
- Remove the aluminium foil from port of plastic bottle container.
- Use an aseptic method to set up the infusion.
- Attach administration set. Refer to directions of the accompanying set for connection, priming of the set and administration of the solution.

Techniques for injection of additive medications:

Warning: Additives may be incompatible. Please check the package insert of the medication before adding it to solution.

To add medication before administration

- Using syringe with an appropriate needle, puncture re-sealable medication port and inject.
- Mix solution and medication thoroughly.

Caution: Do not store bottle containing added medications.

For Non PVC Bag

Instructions for use:

Opening

- Remove the container from the overwrap pouch just before use.
- Check for minute leaks by squeezing bag firmly. If leaks are found, discard Solution, as sterility may be impaired.
- Check solution for limpidity and absence of foreign matter. If solution is not clear or contains foreign matter, discard the solution.

Preparation for administration

Use sterile material for preparation and administration.

- Hang container on IV bag stand through hang hole support.
- Remove the flip off cap from bag container.
- Use an aseptic method to set up the infusion.
- Attach administration set. Refer to directions of the accompanying set for connection, priming of the set and administration of the solution.

Techniques for injection of additive medications:

Warning: Additives may be incompatible. Please check the package insert of the medication before adding it to solution.

To add medication before administration

- Using syringe with an appropriate needle, puncture re-sealable medication port and inject.
- Mix solution and medication thoroughly.
- Discard all unused contents
- Discard after single use.
- Do not reconnect partially used bags.
- Do not remove unit from overwrap until ready for use. The inner bag maintains the sterility of the product.

Caution: Do not store bag containing added medications.

Incompatibility:

As with all parenteral solutions compatibility of the additives with the solution must be assessed before addition. In the absence of compatibility studies, this solution must not be mixed with other medicinal products. Those additives known to be incompatible should not be used.

15. STORAGE CONDITION

Store at temperature not exceeding 30°C.

Date of revision: Jan-2024

16. MANUFACTURER

Otsuka

Otsuka Pharmaceutical India Private Limited

Survey No. 199 to 201 & 208 to 210, Village-Vasana-Chacharwadi,

Tal - Sanand, Dist: Ahmedabad - 382 213, India.

17. Product Registration Holder, Importer & Distributor

BioCare Pharmaceutical (M) Sdn. Bhd.

No.28G, 28-1 & 28-2,

Pusat Dagangan, PJCC Jalan PJS

5/28 46150 Petaling Jaya, Selangor, Malaysia.

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NS

Sodium Chloride Solution for Intravenous Infusion BP (0.9% w/v)

1. COMPOSITION

Active Ingredient:

Each 100 ml contains:

Sodium Chloride BP……..0.9 g

Excipients:

Water for Injections BP

2. PRODUCT DESCRIPTION

NS is available as 100 mL Eurohead Plastic Bottle, 500 mL Eurohead Plastic Bottle & Non PVC Bag.

It is a clear and colourless solution essentially free from visible particles.

3. INDICATION

- Fluid and electrolyte substitution in hypochloraemic alkalosis,
- Chloride losses,
- Short-term intravascular volume substitution,
- Hypotonic dehydration or isotonic dehydration,
- Vehicle solution for compatible electrolyte concentrates and medicaments,
- Externally for wound irrigation and for moistening of wound tamponades and dressings.

4. DOSAGE AND ADMINISTRATION

Recommended dosage schedule

The dose is adjusted according to the actual requirements of water and electrolytes:

Maximum daily dose:

40 ml/kg BW, corresponding to 6 mmol of sodium per kg BW

Infusion rate:

Up to 5 ml/kg BW/h, corresponding to 1.7 drops/kg BW/min

The amount of solution to be used for wound irrigation or moistening depends on actual requirements.

Route of administration I.V.

5. CONTRAINDICATIONS

The solution is contra-indicated in patient presenting hypernatraemia or hyperchloraemia.

The contra-indications related to the added medicinal product should be considered.

6. WARNING AND PRECAUTION

Fluid balance/renal function

Use in patients with (severe) renal impairment

Sodium Chloride 0.9 % w/v should be administered with particular caution to patients with or at risk of severe renal impairment. In such patients, administration of Sodium Chloride 0.9 % w/v may result in sodium retention. (See "Use in patients at risk for sodium retention, fluid overload and oedema" below; for additional considerations.)

Risk of fluid and/or solute overload and electrolyte disturbances.

Depending on the volume and rate of infusion, intravenous administration of Sodium Chloride 0.9 % w/v can cause:

- Fluid and/or solute overload resulting in over hydration/hypervolemia and, for example, congested states, including central and peripheral oedema.
- Clinically relevant electrolyte disturbances and acid-base imbalance.

In general, the risk of dilutional states (retention of water relative to sodium) is inversely proportional to the electrolyte concentrations of Sodium Chloride 0.9 % w/v and its additions. Conversely, the risk of solute overload causing congested states (retention of solute relative to water) is directly proportional to the electrolyte concentrations of Sodium Chloride 0.9 % w/v and its additions.

Special clinical monitoring is required at the beginning of any intravenous infusion. Clinical evaluation and periodic laboratory determinations may be necessary to monitor changes in fluid balance, electrolyte concentrations, and acid-base balance during prolonged parenteral therapy or whenever the condition of the patient or the rate of administration warrants such evaluation.

High volume infusion must be used under specific monitoring in patients with cardiac or pulmonary failure and in patients with non-osmotic vasopressin release (including SIADH), due to the risk of hospital-acquired hyponatraemia.

Hyponatraemia

Patients with non-osmotic vasopressin release (e.g. in acute illness, pain, post-operative stress, infections, burns, and CNS diseases), patients with heart-, liver- and kidney diseases and patients exposed to vasopressin agonists are at particular risk of acute hyponatraemia upon infusion of hypotonic fluids.

Acute hyponatraemia can lead to acute hyponatraemic encephalopathy (cerebral oedema) characterized by headache, nausea, seizures, lethargy and vomiting. Patients with cerebral oedema are at particular risk of severe, irreversible and life-threatening brain injury.

Children, women in the fertile age and patients with reduced cerebral compliance (e.g. meningitis, intracranial bleeding, cerebral contusion and brain oedema) are at particular risk of the severe and life-threatening brain swelling caused by acute

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hyponatraemia.
Use in patients at risk for sodium retention, fluid overload and oedema.
Sodium Chloride 0.9 % w/v should be used with particular caution, if at all, in patients with or at risk for:

- Hypernatraemia. Rapidly correcting hypernatraemia once adaptation has occurred may lead to cerebral oedema, potentially resulting in seizures, permanent brain damage, or death.
- Hyperchloraemia
- Metabolic acidosis, which may be worsened by prolonged use of this product, especially in patients with renal impairment.
- Hypervolaemia such as congestive heart failure and pulmonary oedema may be precipitated, particularly in patients with cardiovascular disease.
- Iatrogenic hyperchloraemic metabolic acidosis (e.g., during intravenous volume resuscitation)
- Conditions that may cause sodium retention, fluid overload and oedema (central and peripheral), such as patients with

- primary hyperaldosteronism,
- secondary hyperaldosteronism, associated with, for example,
- hypertension,
- congestive heart failure,
- liver disease (including cirrhosis),
- renal disease (including renal artery stenosis, nephrosclerosis) or pre-eclampsia.

Medications that may increase the risk of sodium and fluid retention, such as corticosteroids
Infusion reactions
Symptoms of unknown aetiology which can appear to be hypersensitivity reactions have been reported very rarely in association with infusion of Sodium Chloride 0.9 % w/v. These have been characterized as hypotension, pyrexia, tremor, chills, urticaria, rash and pruritus. Stop the infusion immediately if signs or symptoms of these reactions develop.
Appropriate therapeutic countermeasures should be instituted as clinically indicated.
Specific patient groups
The consulting physician should be experienced in this product's use and safety in these special populations that are especially sensitive to rapid changes in serum sodium levels.
Rapid correction of hyponatraemia and hypernatraemia is potentially dangerous (risk of serious neurologic complications). See section "Hyponatraemia/hypernatraemia" above.
Paediatric population
Plasma electrolyte concentrations should be closely monitored in the paediatric population as this population may have impaired ability to regulate fluids and electrolytes. Repeated infusions of sodium chloride should therefore only be given after determination of the serum sodium level.
Geriatric population
When selecting the type of infusion solution and the volume/rate of infusion for a geriatric patient, consider that geriatric patients are generally more likely to have cardiac, renal, hepatic, and other diseases or concomitant drug therapy.

7. PREGNANT AND BREAST FEEDING WOMAN (MUST INCLUDE ABILITY PREGNANCY)

Pregnancy
There are no adequate data from the use of Sodium Chloride 0.9 % w/v in pregnant or lactating women. The physician should carefully consider the potential risks and benefits for each specific patient before administering Sodium Chloride 0.9 % w/v.
Caution is advised with patients with pre-eclampsia (See Section: Special warnings and precautions for use).
When a medicinal product is added, the nature of the drug and its use during pregnancy and lactation has to be considered separately.

8. EFFECTS ON DRIVING AND MACHINE OPERATION

No studies have been conducted on the influence of Sodium Chloride 0.9 % w/v on the ability to operate an automobile or other heavy machinery.

INTERACTION, COMPATIBILITY, INCOMPATIBILITY

Drugs leading to an increased vasopressin effect
The below listed drugs increase the vasopressin effect, leading to reduced renal electrolyte free water excretion and may increase the risk of hospital acquired hyponatraemia following inappropriately balanced treatment with I.V. fluids.

- Drugs stimulating vasopressin release include: Chlorpropamide, clofibrate, carbamazepine, vincristine, selective serotonin reuptake inhibitors, 3.4-methylenedioxy-N-methamphetamine, ifosfamide, antipsychotics, narcotics
- Drugs potentiating vasopressin action include: Chlorpropamide, NSAIDs, cyclophosphamide
- Vasopressin analogues include: Desmopressin, oxytocin, terlipressin

Other medicinal products increasing the risk of hyponatraemia also include diuretics in general and anti-epileptics such as oxcarbazepine.
Interaction:
Caution is advised in patients treated with lithium. Renal sodium and lithium clearance may be increased during administration of Sodium Chloride (0.9 % w/v). Administration of Sodium Chloride (0.9 % w/v) may result in decreased lithium levels.
Corticoids/Steroids and carbenoxolone, are associated with the retention of sodium and water (with oedema and hypertension). See Section: Special warnings and precautions for use.
Compatibility:
Before adding a drug, verify it is soluble and stable in water at the pH range of the Sodium Chloride Solution for Intravenous Infusion BP (0.9 % w/v). Additives may be introduced before infusion or during infusion through the injection site.
It is the responsibility of the physician to judge the incompatibility of an additive medication with the Sodium Chloride Solution for Intravenous Infusion BP (0.9 % w/v) by checking for eventual color change and/or eventual precipitate, insoluble complexes or crystals apparition. The Instructions for Use of the medication to be added must be consulted. When additive is used, verify isotonicity prior to parenteral administration. Thorough and careful aseptic mixing of any additive is mandatory. Solutions containing additives should be used immediately and not stored.
Adding other medication or using an incorrect administration technique might cause the appearance of fever reactions due to the possible introduction of pyrogen. In case of adverse reaction, infusion must be stopped immediately.

9. SIDE EFFECT

The following adverse reactions have been reported in post-marketing experience. The frequency of the adverse drug reactions listed in this section cannot be estimated from the available data.

System Organ Class	Adverse reaction (Preferred term)	Frequency
Nervous system disorders	Tremor	Not known
Vascular disorders	Hypotension	Not known
Skin and subcutaneous tissue disorders	Urticaria Rash Pruritus	Not known
General disorders and administration site conditions	Infusion site reactions, such as • Infusion site erythema, • Vein irritation, Injection sitestreaking, burning sensation, • Local pain or reaction, Infusion site urticaria • Infection at the site ofinjection, • Venous thrombosis orphlebitis extending from thesite of injection, extravasationand hypervolemia • Pyrexia • Chills	Not known

The following adverse reactions have not been reported with this product but may occur:

- Hypernatraemia (eg. when administered to patients with nephrogenic diabetes insipidus or high nasogastric output)
- Hyperchloraemic metabolic acidosis
- Hyponatraemia, which may be symptomatic. Hyponatraemia may occur when normal free water excretion is impaired.(eg SIADH or postoperative)

General adverse effects of sodium excess are described in section: Overdose.
Additives
When Sodium Chloride (0.9 % w/v) is used as a diluent for injectable preparations of other drugs, the nature of additives will determine the likelihood of any other undesirable effect.
If an adverse event occurs the patient should be evaluated and appropriate counter measures be started, if needed the infusion should be stopped. The remaining part of the solution should be kept for investigation if deemed necessary.

10. OVERDOSE: SYMPTOM AND TREATMENT

General adverse effects of sodium excess in the body include nausea, vomiting, diarrhea, abdominal cramps, thirst, reduced salivation and lacrimation, sweating, fever, tachycardia, hypertension, renal failure, peripheral and pulmonary oedema, respiratory arrest, headache, dizziness, restlessness, irritability, weakness, muscular twitching and rigidity, convulsions, coma, and death.
An excessive volume of Sodium Chloride 0.9 % w/v may lead to hypernatraemia (which can lead to CNS manifestations, including seizures, coma, cerebral oedema and death) and sodium overload (which can lead to central and/or peripheral oedema) and should be treated by an attending specialised physician.
Excess chloride in the body may cause a loss of bicarbonate with an acidifying effect. When Sodium Chloride 0.9 % w/v is used as a diluent for injectable preparations of other drugs, the signs and symptoms of over infusion will be related to the nature of the additives being used. In the event of accidental over infusion, treatment should be discontinued and the patient should be observed for the appropriate signs and symptoms related to the drug administered. The relevant and supportive measures should be provided as necessary.

11. PHARMACODYNAMIC PROPERTIES (INCLUDING ATC):

Pharmacotherapeutic group: "Other IV Solution Additives" ATC code: B05XA03
Sodium Chloride Solution for Intravenous Infusion BP (0.9 % w/v w/v) is an isotonic solution, with an approximate osmolarity of 308 mOsm/l.
The pharmacodynamic properties of the solution are those of the sodium and chloride ions in maintaining the fluid and electrolyte balance. Ions, such as sodium, circulate through the cell membrane, using various mechanisms of transport, among which is the sodium pump (Na-K-ATPase). Sodium plays an important role in neurotransmission and cardiac electrophysiology, and also in its renal metabolism.

12. PHARMACOKINETIC PROPERTIES

Sodium is predominantly excreted by the kidney, but there is extensive renal reabsorption.
Small amounts of sodium are lost in the feces and sweat.

13. PACKAGING SIZE

100 mL Eurohead Plastic Bottle; 500 mL in Eurohead Plastic Bottle & Non PVC Bag.