SUMMARY OF PRODUCT CHARACTERISTICS

1 NAME OF THE MEDICINAL PRODUCT

Desmopressin Nasal Spray 10 micrograms/dose

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Desmopressin acetate 0.1 mg/ml

3 PHARMACEUTICAL FORM

Nasal spray, solution

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

Desmopressin Nasal Spray 10 micrograms/dose is indicated for:
1) The treatment of nocturia associated with multiple sclerosis where other treatments have
failed.
2) The diagnosis and treatment of vasopressin-sensitive cranial diabetes insipidus.
3) Establishing renal concentration capacity.

4.2 Posology and method of administration

Each spray contains 10 micrograms desmopressin acetate.
Dosage and administration
Treatment of nocturia: For multiple sclerosis patients up to 65 years of age (with normal
renal function) suffering from nocturia the dose is one or two sprays intranasally (10 to 20

micrograms) at bedtime. Not more than one dose should be used in any 24 hour period. If a
dose of two sprays is required this should be as one spray in each nostril.
During the treatment of nocturia the fluid intake should be limited to a minimum and only to
satisfy thirst for 8 hours following administration.
Treatment of diabetes insipidus: Dosage is individual but clinical experience has shown that
the average maintenance dose in adults and children is one or two sprays (10 to 20
micrograms) once or twice daily. If a dose of two sprays is required, this should be as one
spray into each nostril.

Diagnosis of diabetes insipidus: The diagnostic test in adults and children is two sprays (20
micrograms).
Failure to elaborate a concentrated urine after water deprivation, followed by the ability to
do so after the administration of Desmopressin Nasal Spray 10 micrograms/dose confirms
the diagnosis of cranial diabetes insipidus. Failure to concentrate after the administration
suggests nephrogenic diabetes insipidus.
When used for diagnostic purposes the fluid intake must be limited and not exceed 0.5 litres
from 1 hour before until 8 hours after administration.
Renal function testing: Recommended doses for the renal concentration capacity test:
Adults: Two sprays into each nostril (a total of 40 micrograms).
Children (1-15 years): One spray into each nostril (a total of 20 micrograms).
Infants (to 1 year): One spray (10 micrograms).
Adults and children with normal renal function can be expected to achieve concentrations
above 700 mOsm/kg in the period 5 to 9 hours following administration of Desmopressin
Nasal Spray 10 micrograms/dose. It is recommended that the bladder should be emptied at
the time of administration.
When used for diagnostic purposes the fluid intake must be limited and not exceed 0.5 litres
from 1 hour before until 8 hours after administration.
In normal infants a urine concentration of 600 mOsm/kg should be achieved in the 5 hour
period following administration of Desmopressin Nasal Spray 10 micrograms/dose. The
fluid intake at the two meals following the administration should be restricted to 50% of the
ordinary intake in order to avoid water overload.

4.3 Contraindications

Desmopressin Nasal Spray 10 micrograms/dose is contra-indicated in cases of:

Cardiac insufficiency and other conditions requiring treatment with diuretic agents.

Hypersensitivity to the active substance or to any of the excipients, including hypersensitivity to the preservative.

Moderate and severe renal insufficiency (creatinine clearance below 50ml/min).

Known hyponatraemia.

Syndrome of inappropriate ADH secretion (SIADH).

Before prescribing Desmopressin Nasal Spray 10 micrograms/dose the diagnosis of habitual or psychogenic polydipsia (resulting in urine production exceeding 40mg/kg/24hours) and alcohol abuse should be excluded.

When used to control nocturia in patients with multiple sclerosis, Desmopressin Nasal Spray 10 micrograms/dose should not be used in patients with hypertension or cardiovascular disease.

Desmopressin Nasal Spray10 micrograms/dose should not be prescribed to patients over the age of 65 for the treatment of nocturia associated with multiple sclerosis.

4.4 Special warnings and precautions for use

Desmopressin Nasal Spray should only be used in patients where orally administered formulations are not suitable.

When Desmopressin Nasal Spray is prescribed, it is recommended:
- to start at the lowest dose
- to ensure compliance with fluid restriction instructions
- to increase dosage progressively, with caution
- to ensure that in children, administration is under adult supervision in order to control the dose intake.

Care should be taken with patients who have reduced renal function and/or cardiovascular disease or cystic fibrosis.

Severe bladder dysfunction and outlet obstruction should be considered before starting treatment.

When Desmopressin Nasal Spray 10 micrograms/dose is used in the treatment of nocturia, associated with multiple sclerosis, periodic assessments should be made of blood pressure and weight to monitor the possibility of fluid overload. Treatment with desmopressin should be interrupted during acute intercurrent illness characterised by fluid and/or electrolyte imbalance (such as vomiting, diarrhoea, systemic infections, fever, gastroenteritis).

In the event of signs or symptoms of water retention and/or hyponatraemia (headache, nausea/vomiting, weight gain and in severe cases, convulsions) treatment should be interrupted until the patient has fully recovered. When restarting treatment, strict fluid restriction should be enforced.

Elderly patients and patients with low serum sodium levels may have an increased risk of hyponatraemia.

Precautions to avoid hyponatraemia, including careful attention to fluid restriction and more frequent monitoring of serum sodium, must be taken in case of concomitant treatment with drugs which are known to induce SIADH e.g. tricyclic antidepressants, selective serotonin reuptake inhibitors, chlorpromazine, carbamazepine and NSAIDs.

When used for diagnostic purposes, fluid intake must be limited and not exceed 0.5 litres from 1 hour before until 8 hours after administration.

Following diagnostic testing for diabetes insipidus or renal concentration, care should be taken to prevent fluid overload. Fluid should not be forced, orally or parenterally, and patients should only take as much fluid as they require to satisfy thirst.

There is some evidence from post-marketing data for the occurrence of severe hyponatraemia in association with the nasal spray formulation of desmopressin, when it is used in the treatment of cranial diabetes insipidus.

Precautions to prevent fluid overload must be taken in:
- conditions characterised by fluid and/or electrolyte imbalance
- patients at risk for increased intracranial pressure

Renal concentration capacity test in children below the age of 1 year should only be performed under carefully supervised conditions in hospital.

This medicine contains 0.042 mg potassium per dose. To be taken into consideration by patients with reduced kidney function or patients on a controlled potassium diet.

4.5 Interaction with other medicinal products and other forms of interaction

Indomethacin may augment the magnitude but not the duration of response to desmopressin.
Substances which are known to release antidiuretic hormone e.g. tricyclic antidepressants,
chlorpromazine and carbamazepine, may cause an additive antidiuretic effect and increase
the risk of water retention.

4.6 Fertility, Pregnancy and lactation

Use in pregnancy: Desmopressin Nasal Spray 10 micrograms/dose should be given with
caution to pregnant patients, although the oxytocic effect of desmopressin is very low.
Reproduction studies performed in rats and rabbits with doses of more than 100 times the
human dose have revealed no evidence of a harmful action of desmopressin on the fetus.
There have been rare reports of malformations in children born to mothers treated for
diabetes insipidus during pregnancy. However, a review of available data suggests no
increase in the rate of malformations in children exposed to desmopressin throughout
pregnancy.
Use in lactation: Results from analyses of milk from nursing mothers receiving high dose
desmopressin (300 micrograms intranasally) indicate that the amounts of desmopressin that
may be transferred to the child are considerably less than the amounts required to influence
diuresis.

4.7 Effects on ability to drive and use machines

No adverse effects are expected.

4.8 Undesirable effects

Side-effects include headache, stomach pain, nausea, nasal congestion, rhinitis and epistaxis. Isolated cases of allergic skin reactions and more severe general

allergic reactions have been reported. Very rare cases of emotional disorders including aggression in children have been reported. Treatment with desmopressin without concomitant reduction of fluid intake may lead to water retention/hyponatraemia with or without accompanying warning signs and symptoms (headache, nausea/vomiting, weight gain, decreased serum sodium and in severe cases, cerebral oedema and convulsions).

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

4.9 Overdose

An overdose of Desmopressin Nasal Spray 10 micrograms/dose can lead to hyponatraemia
and convulsions.
Treatment: If hyponatraemia occurs, treatment with Desmopressin Nasal Spray 10
micrograms/dose should immediately be discontinued and fluid intake restricted until serum
sodium is normalised.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Mode of action and pharmacodynamic actions: Desmopressin is a synthetic analogue of the
natural hormone, arginine vasopressin. Desmopressin differs from the natural hormone by
two chemical changes: deamination of 1-cysteine and replacement of 8-L-arginine by 8-Darginine.
These changes considerably prolong the duration of the antidiuretic activity and
almost eliminate the pressor activity in therapeutic doses.

5.2 Pharmacokinetic properties

Bioavailability is about 10% after intranasal administration. The maximum plasma
concentration is reached within one hour of administration. The plasma half-life is 2-3
hours. Irrespective of the form of administration, the effects lasts about 8 hours,
hi a healthy volunteers study the above values for the half-life and Tmax was confirmed and
the maximal plasma concentration was 52.5 picogram/ml.

5.3 Preclinical safety data

None relevant.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Not relevant.

6.2 Incompatibilities

Not relevant.

6.3 Shelf life

24 months

6.4 Special precautions for storage

Store below 25°C.

6.5 Nature and contents of container

Metered dose nasal spray with applicator and cap. The glass bottle is made of Amber Glass
Type 1 Ph.Eur. (10 ml bottle) and contains 6 ml. Each spray contains 10 micrograms
desmopressin acetate.

6.6 Special precautions for disposal

See enclosed instructions for use.

7 MARKETING AUTHORISATION HOLDER

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8 MARKETING AUTHORISATION NUMBER(S)

PL 20075/0571

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

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10 DATE OF REVISION OF THE TEXT

26/06/2017