VENTURA COUNTY
HEALTH CARE PLAN

Prior Authorization DRUG Guidelines

DDAVP®(desmopressin)

Effective Date: 10/27/05

Date Developed: 7/26/05 by C. Wilhelmy MD

Last Approval Date: 1/26/16, 1/24/17, 1/23/18, 1/22/19

(Archived 1/22/19)

Desmopressin is an antidiuretic hormone analog. It increases cyclic adenosine monophosphate (cAMP) which increases water permeability at the renal tubule resulting in decreased urine volume and increased osmolality; it also causes peristalsis by directly stimulating the smooth muscle in the GI tract.

Pre-authorization Criteria:

Injection/Nasal Spray: treatment of diabetes insipidus; maintenance of hemostasis and control of bleeding in hemophilia A with factor VIII coagulant activity levels >5% ; mild-to-moderate classic von Willebrand's disease (type 1) with factor VIII coagulant activity levels >5%

Tablet: treatment of central diabetes insipidus; temporary polyuria and polydipsia following pituitary surgery or head trauma; primary nocturnal enuresis (alone or adjunctive to behavioral conditioning or other non-pharmacological intervention)

Off-Label: prevention of surgical bleeding in patients with uremia; uremic bleeding associated with acute or chronic renal failure

VENTURA COUNTY
HEALTH CARE PLAN

1. Recommended Dosing Regimen and Authorization Limit:
2.

Drug	Dosing Regimen	Authorization Limit
Desmopressin Acetate[R] (oral)	***Primary Nocturnal Enuresis*** Adults and children over 6 years of age: Patients begin at 0.2 mg at bedtime. The dose may be adjusted upward to a maximum dose of 0.6 mg. ***Central Diabetes Insipidus*** Adults and Children: It is recommended that patients be started on doses of 0.05 mg (1/2 of the 0.1 mg tablet) two times a day and individually adjusted to their optimum therapeutic dose.	One year
Desmopressin Acetate[R] (nasal)	***Central Diabetes Insipidus*** Adults: The usual dosage range is 0.1 to 0.4 mLs daily, either as a single dose or divided into 2 or 3 doses.	One year

	Most adults require 0.2 mLs daily in 2 divided doses. <u>Children (aged 3 months to 12 years):</u> The usual dosage range is 0.05 to 0.3 mLs daily, either as a single dose or divided into 2 doses.	
Desmopressin Acetate[R] (injection)	***Central Diabetes Insipidus*** <u>Adults:</u> The usual dosage range is 0.5 ml (2 mcg) to 1.0 ml (4 mcg) daily, administered subcutaneously or intravenously usually in two divided doses ***Hemophilia A or Willebrands disease Type 1*** <u>Adults and children</u>: An intravenous solution of 0.3 mcg/kg diluted in sterile physiologic saline and infused slowly over 15-30minutes. 50 ml of diluent is recommended. For children less than 10 kg, 10 ml of diluent is recommended.	One year

MONITORING PARAMETERS - Serum and urine sodium, urine specific gravity, urine and serum osmolality; urine output, fluid input and output, blood pressure, heart rate

WARNINGS / PRECAUTIONS - Use with caution in patients with seizure disorders, migraine, asthma, vascular disease, renal disease, cardiac disease; chronic nephritis with nitrogen retention. Goiter with cardiac complications, arteriosclerosis; I.V. infiltration may lead to severe vasoconstriction and localized tissue necrosis; also, gangrene of extremities, tongue, and ischemic colitis. Elderly and pediatric patients should be cautioned not to increase their fluid intake beyond that sufficient to satisfy their thirst in order to avoid water intoxication and hyponatremia; under experimental conditions, the elderly have shown to have a decreased responsiveness to vasopressin with respect to its effects on water homeostasis

VENTURA COUNTY
HEALTH CARE PLAN

ADVERSE REACTIONS SIGNIFICANT - Frequency not defined.
Cardiovascular: Increased blood pressure, arrhythmia, venous thrombosis, vasoconstriction (with higher doses), chest pain, MI
Central nervous system: Pounding in the head, fever, vertigo
Dermatologic: Urticaria, circumoral pallor
Gastrointestinal: Flatulence, abdominal cramps, nausea, vomiting
Genitourinary: Uterine contraction
Neuromuscular & skeletal: Tremor
Respiratory: Bronchial constriction
Miscellaneous: Diaphoresis
PATIENT EDUCATION - Side effects such as abdominal cramps and nausea may be reduced by drinking a glass of water with each dose

REFERENCES

1. Aventis Pharmaceuticals Inc website accessed September 26, 2005.
2. Chojkier, M, Groszmann, RJ, Atterbury, CE, et al. A Controlled Comparison of Continuous Intraarterial and Intravenous Infusions of Vasopressin in Hemorrhage From Esophageal Varices. Gastroenterology 1979; 77:540.
3. Dunser, MW, Mayr, AJ, Ulmer, H, et al. The Effects of Vasopressin on Systemic Hemodynamics in Catecholamine-Resistant Septic and Postcardiotomy Shock: A Retrospective Analysis. Anest Analg 2001; 93:7.
4. Gazmuri, RJ, Shakeri, SA. Low-Dose Vasopressin for Reversing Vasodilation During Septic Shock. Crit Care Med 2001; 29:673.
5. Holmes, CL, Walley, KR, Chittock, DR, et al. The Effects of Vasopressin on Hemodynamics and Renal Function in Severe Septic Shock: A Case Series. Inten Care Med 2001; 27:1416.
6. Kahn, JM, Kress, JP, Hall, JB. Skin Necrosis After Extravasation of Low-Dose Vasopressin Administered for Septic Shock. Crit Care Med 2002; 30:1899.
7. Landry, DW, Levin, HR, Gallant, EM, et al. Vasopressin Deficiency Contributes to the Vasodilation of Septic Shock. Circulation 1997; 95:1122.
8. Landry, DW, Levin, HR, Gallant, EM, et al. Vasopressin Pressor Hypersensitivity in Vasodilatory Septic Shock. Crit Care Med 1997; 25:1279.
9. Lindeman, RD, Lee TD, Jr, Yiengst, MJ, et al. Influence of Age, Renal Disease, Hypertension, Diuretics, and Calcium on the Antidiuretic Responses to Suboptimal Infusions of Vasopressin. J Lab Clin Med 1966; 68:206.
10. Malay, MB, Ashton, RC, Landry, DW, et al. Low-Dose Vasopressin in the Treatment of Vasodilatory Septic Shock. J Trauma 1999; 47:699.
11. Miller, JH, Shock, NW. Age Differences in the Renal Tubular Response to Antidiuretic Hormone. J Gerontol 1953; 8:446.
12. Reid, IA. Role of Vasopressin Deficiency in the Vasodilation of Septic Shock. Circulation 1997; 95:1108.
13. Rozenfeld, V, Cheng, JW. The Role of Vasopressin in the Treatment of Vasodilation in Shock States. Ann Pharmacother 2000; 34:250.

14. Stiell, IG, Hebert, PC, Wells, GA, et al. Vasopressin Versus Epinephrine for Inhospital Cardiac Arrest: A Randomised Controlled Trial. Lancet 2001; 358:105.
15. Tsuneyoshi, I, Yamada, H, Kakihana, Y, et al. Hemodynamic and Metabolic Effects of Low-Dose Vasopressin Infusions in Vasodilatory Septic Shock. Crit Care Med 2001; 29:487.
16. Tuggle, DW, Bennett, KG, Scott, J, et al. Intravenous Vasopressin and Gastrointestinal Hemorrhage in Children. J Pediatr Surg 1988; 23:627.
17. Wenzel, V, Krismer, AC, Arntz, HR, et al. A Comparison of Vasopressin and Epinephrine for Out-of-Hospital Cardiopulmonary Resuscitation. European Resuscitation Council Vasopressor During Cardiopulmonary Resuscitation Study Group. N Engl J Med. 2004; 350:105.
18. DAVP^{R} Tablets. Prescribing information. Bridgewater, NJ: Aventis Pharmaceuticals Inc. October 2007.
19. DDAVP^{R} Nasal Spray. Prescribing information, Bridgewater, NJ: Aventis Pharmaceuticals Inc. October 2007.
20. DDAVP^{R} Injection. Prescribing information, Bridgewater, NJ: Aventis Pharmaceuticals Inc. October 2007.
21. American Hospital Formulary Service Drug Information. AHFS Web site. Available at: http://www.medicinescomplete.com/mc/ahfs/current/. Accessed July 07, 2010.

Revision History:

Date Reviewed/Updated: 10/04/11 A. Reeves A. MD
Date Reviewed/No Updates: 4/2/12; 1/16/13 by A. Reeves MD
Date Approved by P&T Committee: 10/27/05; 10/25/11; 4/24/12; 1/29/13
Date Reviewed/No Updates: 1/28/14 by C. Sanders MD
Date Approved by P&T Committee: 1/28/14
Date Reviewed/No Updates: 1/13/15 by C. Sanders, MD
Date Approved by P&T Committee: 1/27/15
Date Reviewed/Updated: 2/20/15 by C. Sanders, MD; R. Sterling, MD

VENTURA COUNTY
HEALTH CARE PLAN

Date Approved by P&T Committee: 1/26/16
Date Reviewed/No Updates: 1/24/17 by C. Sanders, MD; R. Sterling, MD
Date Approved by P&T Committee: 1/24/17
Date Reviewed/No Updates: 1/23/18 by C. Sanders, MD; R. Sterling, MD
Date Approved by P&T Committee: 1/23/18
Date Reviewed/Archived: 1/22/19 by C. Sanders, MD; R. Sterling, MD
Date Approved by P&T Committee: 1/22/19

Revision Date	**Content Revised (Yes/No)**	**Contributors**	**Review/Revision Notes**
1/24/17	No	Catherine Sanders, MD; Robert Sterling, MD	Annual review
1/23/18	No	Catherine Sanders, MD; Robert Sterling, MD	Annual review
1/22/19	No	Catherine Sanders, MD; Robert Sterling, MD	Archived