Prague, Dezember 10, 2010

Infusion therapy by the athletes

Intravenous infusions have been included in the WADA list of prohibited substances and

 $methods\ under\ Section\ M2.\ Prohibited\ Methods,\ Chemical\ and\ Physical\ Manipulation\ and$

are prohibited both in- and out-of-competition.

An IV infusion is the supply of fluids or other liquid substrates through a vein. It is

achieved by a special infusion set (infuzion needle, set functioning on the level

difference). The volume of fluid exceeds 50 ml. An intravenous injection is the supply of

fluid or medication by means of a simple syringe. Injections with a simple syringe are

permitted if the volume does not exceed 50 mL, and the intravenous injections are given

at intervals equal or greater than six hours.

As legitimate medical indications for IV infusions are considered:

1. life rescuing medical emergencies including resuscitation

2. blood substitution by the acute blood deprival

3. by the surgical interventions and surgeries

4. application of medicaments and fluids (including some clinical investigations) in

situation with no possibility of other options, especially administration by mouth.

The TUE for infusion treatment can be granted during the hospital admission when

treating other illness. The TUE application must be accompanied by precise description of

the specific medical indication for the IV infusion and treatment history, description,

volume and the rate of infusion to be used and all clinical and laboratory results.

Dehydration arised from the exhaustive training or sports effort doesn't provide any

reason for indication of intravenous infusion and granting a TUE.

Dr. Tomáš Paul

Chairman, Therapeutic Use Committee (TUEC) by CADC

References:

1. WADA, The Prohibited List 2005, 2006, 2007, 2008, 2009, 2010 and 2011, including

the Explanatory note to the List 2009

2. Vandenbos F., et all: Relevance and complications of intravenous infusion at the

emergency unit at Nice University Hospital.

J. of Infection 46 (3): 173-6, 2006

3. Arbitral Award, CAS 2002/A/389-393

- 4. Arbitral Award, CAS2006/A/1102 & 1146
- 5. Garnier A: Memo, Intravenous infusion issue, 2004?
- 6. ASOIF Medical Consultative Group: Minutes of the meeting 7th May 2006
- 7. Canadian Academy of Sports Medicine: A brief overview about intravenous hydration in athletics, Casa DJ, Maresh Cm, Armstrong LE et al Intravenous versus oral rehydration during a brief period: responses to subsequent exercise in the heat.

Med Sci Sports Exercise 2000 Jan; 32(1): 124-133

8. Webster S, Rutt R, Weltmann, A

Physiological effects of a weight loss regimen practiced by college wrestler

9. Naghii, MR

The Significance of Water in Sport and Weight Control Nutrition and Health, 2000, Vol. 14, pp. 127-132

10. Sawka, MN

Physiological consequences of hypohydration: exercise performance and thermoregulation

Medicine and Science in Sport and Exercise 0195-9131/92/2406 Vol. 24, No, 6

11. Maresh CM, Herrera-Soto JA, Armstrong LE, et al.

Perceptual responses in the heat after intravenous versus oral rehydration Med Sci Sport Exercise. 2001 jun; 33(6) 1039-1045

12. Castellani JW, Maresh CM, Armstrong LE, et al

Endocrine responses during exercise-heat stress: effects of prior isotonic and hypotonic intravenous rehydration.

European J Appl Physiol Occup Physiol. 1998 Feb; 77(3): 242-248.

13. Kraemer WJ, Fry AC, Rubin MR, Triplett-McBride T, et al Physiology and performance responses to tournament wrestling Medecine and Science in Sports and Exercise 0195-9131/01/3308-1367

14. Mudambo SM, Reynolds N

Body fluid shits in soldiers after a jogging/walking exercise in the heat Central African Journal of Medicine 2001 Sept-Oct; 47(99-10), 220-225

15. Landers DM, Arent SM, Lutz RS

Affect and cognitive performance in high school wrestlers undergoing rapid weight loss Journal of Sport and Exercise Psychology 2001, 23, 307-316.

16. Riebe D, Maresh CM, Armstrong LE, Kenefick RW, et al Effects of oral and intravenous rehydration on ratings of perceived exertion and thirst Med Sci Sports Exerc. 1997 Jan (1): 117-124

- 17. Noakes TD, Walsh RM, Hawley JA, Dennis SC Impaired high-intensity cycling performance time t low levels of dehydration International Journal of Sports Medicine 15 (1994) 392-398.
- 18. International Standard for Therapeutic Use Exemptions, WADA 2011
- 19. Medical Information to Support the Decisions of TUECs, Intravenous Infusion, WADA 2010