DDAVP in Uremia

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Dear Sir,

In recent years it has been shown that the intravenous injection of DDAVP (1-deamino-8-D-arginine-vasopressin), a synthetic analogue of the antidiuretic hormone, provokes a rapid, marked, and transient increase of factor VIII/von Willebrand factor (FVIII/VWF) in normal subjects and patients with mild hemophilia A or von Willebrand's disease [1-3]. Recently, Mannucci et al. [4] report that infusions of DDAVP shorten the prolonged bleeding time in patients with uremia. These authors suggest that this is dependent on the appearance in plasma of larger von Willebrand factor multimers than those present in the resting state.

Uremia is commonly associated with wide variations in the levels of FVIII/VWF-related activities [5,6]. One of us has suggested that the response to DDAVP in subjects with elevated baseline concentrations of FVIII/VWF activities is accompanied by a decreased release from those storage pool(s) mobilized by DDAVP [7]. In the report of Mannucci et al. [4], levels of FVIII/VWF activities were moderately elevated. We have evaluated the response of FVIII/VWF and bleeding time to DDAVP (0.3 µg/kg body weight) in 5 uremic patients (3 men and 2 women with an average age of 34 years, range 16-50) with chronic glomerulonephritis who were undergoing regular hemo-dialysis. These patients showed high levels of FVIII/VWF activities at the beginning of the study, which was begun 24 h after the end of dialysis (table I). The remaining clinical characteristics were similar to those described by Mannucci et al. [4]. Bleeding time and plasma collection were carried out immediately before DDAVP and again 1 h after the DDAVP infusion. Factor VIII/VWF activities were assayed as previously described [8]. Template bleeding time was assessed with the Simplate II device (General Diagnostic). Table I shows that the bleeding time was not

Table I. Laboratory measurements before and after DDAVP in patients with uremia

146

Vicente/ Alberca/Macias/Lopez Borrasca

reduced in any of the patients 1 h after the infusion of DDAVP. Furthermore, DDAVP did not produce any important increase in FVIII/VWF activities.

These results indicate that the infusion of DDAVP does not shorten the bleeding time in any of the uremic patients since in those with high basal levels of FVIII/VWF, where response to DDAVP is poor, there is no variation in this parameter.

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Vicente

V.; Alberca

I.; Lopez Borrasc

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