DDAVP in Bleeding Disorders

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DDAVP, a synthetic vasopressin analogue, stimulates the endogenous factor coagulation activity (F VIII :C) through a central receptor. The increase is from two- to fourfold, therefore a therapeutical level can only be expected in haemophiliacs with a pretreatment level of 5% or more. The effect after 30–120 min. The disappearance rate is comparable with that of human F VIII :C. Repeated responses can be obtained; however, the stimulation effect decreases when the DDAVP is given less than 12 h after the last dose. Simultaneously with F VIII :C an increase of F V-related properties, like F V-related antigen, von Willebrands factor, and bleeding time reduction, has been observed. These properties can be stimulated separately and simultaneously. The effect is dose dependent, with intravenous infusion at a dose from 0.1 to 0.6 µg/kg BW. With intranasal application a much higher dose of 2 µg/kg BW is necessary. The intranasal response is less reproducible because of resorption problems. Side effects, like flush, blood pressure increase, tachycardia, water retention can be avoided when the intravenous dose is less than 0.5 µg/kg BW and the infusion time is at least 25 min. Preferably fibrinolysis inhibitors should be applied to overcome the fibrinolytic effect of DDAVP. So far, DDAVP has been successfully applied in mild and moderately severe haemophiliacs and patients with von Willebrand's disease. In any case, the DDAVP effect should be demonstrated before it is applied therapeutically.