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Letter To The Editor
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Bullous Drug Eruption Due to Desmopressin

To the Editor.- A 18-year-old boy was admitted to our outpatient clinic with the complaint of bullous eruption which had started a day ago. 4 days prior to admission he had been prescribed desmopressin (Minirin®) 0,2 mg/day perorally for enuresis nocturna. He had no significant medical past history or drug use otherwise. Also he had no history of a preeciding viral infection. On physical examination his vital signs were stable, and the respiratory, cardiovascular and abdominal systems were unremarkable. Dermatological examination revealed multiple erythematous based, tense vesicles and bulles which contained clear serous exudate especially on the trunk and face. The bulles tended to form groups around the mouth (**Figure 1**). There was also erosions and tense bulles in the oral cavity. Routine full blood count and blood chemistries were normal. The patient was advised to stop desmopressin and topical treatment including corticosteroids were prescribed. Punch biopsy taken for histopathological examination revealed vesicle formation with subepidermal detachment. There was fibrin accumulation with neutrophils and nuclear dust inside of vesicle. In the papillary dermis at the base of vesicle, perivascular lymphocyte, eosinophil and neutrophil infiltration was noted (**Figure 2**). Direct immunoflorescence examination was negative for IgG, M, A, C3 and C4 staining. The lesions regressed in 10 days with only topical treatment.

In our patient we thought the diagnosis of bullous drug eruption secondary to desmopressin with the temporal sequence in combination with the negative immunoflorescence findings in the perilesional skin and a rapid resolution of the reaction upon cessation of the offending medication. This is the first case report of bullous drug reaction associated with desmopressin. Desmopressin is a a synthetic arginine vasopressin analog which has been used for 40 years. It has been used effectively for the treatment of nocturnal enuresis, central

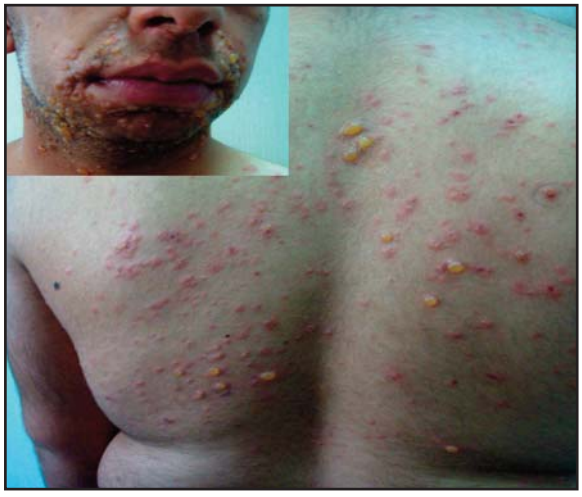

Figure 1. Multiple erythematous based, tense vesicles and bulles which contained clear serous exudate on the trunk and face. The bulles tended to form groups around the mouth

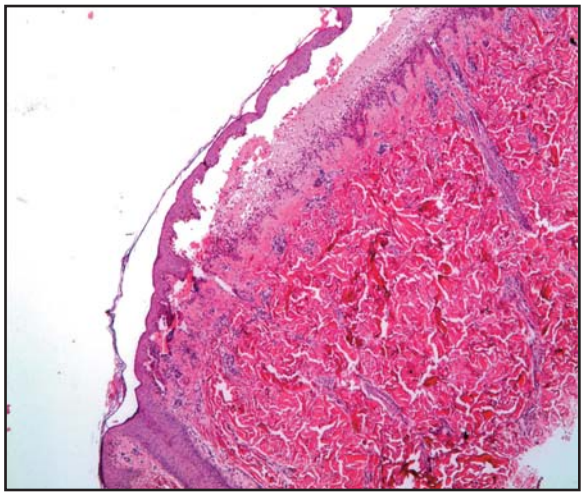

Figure 2. A vesicle characterized by subepidermal detachment. There is an accumulation of inflammatory exudates comprising fibrin, neutrophils and nuclear dust, H&Ex40

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diabetes inspidus and some coagulopathies. The antidiuresis induced by vasopressin is more potent than of arginine vasopressin, resulting in an increased urine osmolalility and decreased urine output [**1**]. No specific skin side effects due to desmopressin could be found in the literature but there are reports of vasopressin induced necrosis at sites of extravasation. Also cases of cutaneous necrosis and bulla formation at sites distant from direct intravenous flow have been reported [**2, 3, 4**]. Skin necrosis and bullae formation at distant site of vasopressin infusion was thought to be related to systematically induced vasoconstriction [**4**]. We do not know the exact mechanism how desmopressin caused the bullous reaction in our patient but compared to vasopressin, it produces little or no vasoconstriction so it is not very possible that similar mechanism was responsible in our patient [**5**].

In conclusion we report a new case of bullous eruption secondary to desmopressin therapy used for management of enuresis nocturna. Althouh rare, the possibilty of bullous reaction should be kept in mind as a complication of desmopressin.

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