ACQUIRED FANCONI SYNDROME AND SEVERE HYPOPHOSPHATEMIA AFTER EXPOSURE TO BEE VENOM

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Fanconi syndrome (FS) is a disorder of proximal renal tubular transport leading to variable expression of aminoaciduria, glycosuria, phosphaturia, and type II renal tubular acidosis. Acquired Fanconi syndrome has been reported most often in association with drugs, paraproteinemias, amyloidosis and heavy metal toxicity. We report exposure to bee venom as an additional cause of Fanconi syndrome and dangerous hypophosphatemia.

CASE REPORT:

A 27-year-old male oilfield worker with no history of chronic illnesses presented 2 days after suffering a bee sting in an area with a high population of Africanized bees. He reported the immediate onset of shortness of breath and choking sensation which was partially relieved by racemic epinephrine given subcutaneously in the field. Over the next two days he developed severe muscle weakness with worsening respiratory difficulties, and polyuria, forcing him to present to hospital. He also noted polyuria without any dysuria, or hematuria. He denied any recreational drug use, including alcohol or glue sniffing. He had no family history of renal or metabolic disease.

Physical findings were remarkable only for mild dehydration, furred tongue, expression of thirst and generalized reduction in muscle power. Serum phosphorous on admission was 1.3. Urinary phosphate excretion measured 836 mg per 24 h. Serum glucose was normal with glycosuria of 500 mg/dl. Serum potassium was 2.7 mEq/dL. Urine K was 31 mmol/dl. Serum chloride of 112 meq/L, bicarbonate of 18 meq/L. There were no urinary casts and urine cystine was within normal range at 67 micromoles per deciliter. Hemoglobin A1c, TSH and vitamin D and parathyhroid hormone levels were normal. Urine protein electrophoresis and immunofixation was negative, as was serum protein electrophoresis, and there was no evidence of paraproteinemia. .He was treated successfully with intravenous potassium and phosphate repletion and hydrocortisone. Intravenous fluids were required to replace volume deficits and polyuria in excess of eight liters per day. This represents, to our knowledge, the only reported case of FS after exposure to bee venom.