



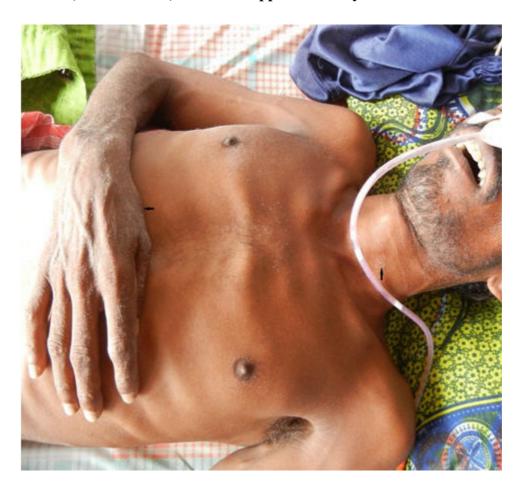
Journal of the New Zealand Medical Association

Deposit on the skin in critical care: can it be a clue to diagnosis?

A 42-year-old male patient presented with sudden onset high rise of temperature with altered sensorium. On examination the patient was obtunded, having tachycardia (pulse 110/minute) and positive meningeal signs. Laboratory evaluation showed high leukocyte count, raised erythrocyte sedimentation rate (ESR), normal electrolyte and altered renal profile (blood urea nitrogen 32.84 μ mol/L and creatinine 707.2 μ mol/L), and eGFR of 7 mL/min/1.73 m² (according to 'modification of diet for renal disease' formula).

On the fourth day of admission the patient developed white powder-like material all over his body—predominantly on the face, trunk and upper extremity (see Figure 1). The patient was diagnosed to be a case of septicaemia with acute renal failure (due to septic acute tubular necrosis) with deposition of uremic frost on the skin. The patient died on the sixth day despite receiving one session of haemodialysis.

Figure 1. Photograph of the patient showing white powder-like deposition over the face, front of neck, trunk and upper extremity



Uremic frost was first described by Hirschsprung in 1865 and is believed to result from evaporation of sweat that contains high levels of urea and other nitrogenous waste products. These waste products crystallize on the skin, most commonly on the face.¹

Author information: Manish Saha, Resident; Tarkeswar Aich, Resident; Chiranjib Das, Resident; Mainak Mukhopadhyay, Resident; Kartick Patar, Resident; Department of Medicine, Nil Ratan Sircar Medical College and Hospital, Kolkata, India

Correspondence: Manish Saha, 1/A East Talbagan Road, P.O. Nona Chandanpukur, Barrackpore, Kolkata – 700122, India. Email: drmanishsaha@gmail.com

Reference:

1. Udayakumar P, Bal Subramanian S, Ram lingam KS, et al. Cutaneous manifestations in patients with chronic renal failure on hemodialysis. Indian J Dermatol Venereol Leprol. 2006;72:119–25.