



## Pseudohyponatremia in Multiple Myeloma

Sir,

Pseudohyponatremia is a clinical condition characterized by an increased fraction of protein or lipid in plasma thereby resulting in an artificially low plasma sodium concentration.<sup>1</sup>

A 67 years old male patient, known case of multiple myeloma already on chemotherapy was presented with complains of bone pain and generalized fatigue. On examination patient was anemic and hepatosplenomegaly was present. Investigation revealed: Hb 8.0 gm/dl, ESR 120mm/1<sup>st</sup> hrs. serum albumin 3.28 mg/dl, serum globulin 3.6 gm/dl, Serum Na<sup>+</sup> 102 meq/L, serum was viscous, no creamy layer was present. X-ray skull showed multiple punch out lesions, serum electrophoresis – M component 3.2gm/dl. Bone marrow showed plasma cells >20%. Other investigations: TLC, DLC, blood sugar, blood urea, serum creatinine, serum lipid profile, serum K<sup>+</sup>, serum Ca<sup>+</sup>, Serum phosphate, CT, BT, PT-INR, ECG, X-ray chest, urine complete examination all were normal.

As the patient was a known case of multiple myeloma without any symptoms of hyponatremia despite severely decreased serum sodium concentration, without having creamy serum (no chylomicronemia) the possibility was considered of pseudohyponatremia, patient was not given any specific therapy for hyponatremia. Differential diagnosis include Chylomicronemia – in which serum is creamy, Paraproteinemia – in which increase serum viscosity and increased plasma osmolality - like hyperglycemia and mannitol.<sup>2</sup>

Hyponatremia in an asymptomatic patient demands careful evaluation before institution of therapy. In addition the presence of normal serum sodium level in a patient with multiple myeloma should alert the clinician to the possibility that hypernatremia and hypertonicity may be present.<sup>3</sup>

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## Reporting a case of Scrub Typhus from Andhra Pradesh

Sir,

Scrub Typhus is a well known disease in India and has been documented in several states like Haryana, Jammu and Kashmir, Himachal Pradesh, Uttaranchal, West Bengal, Assam, Maharashtra, Kerala and Tamilnadu.<sup>1</sup> However, to our knowledge, it has not been well documented in Andhra Pradesh. The reason for this geographical restriction of Scrub Typhus is not clear. It is possible that it exists in other states as well but goes unnoticed as physicians fail to recognize it. Many physicians may be treating their patients with Scrub Typhus without considering it in their differential diagnoses as it responds to commonly used antibiotics like Doxycycline, Azithromycin and Chloramphenicol. The pathognomic clinical sign of Scrub Typhus is "eschar" which may be inconspicuous as it is often present in areas like groin, gluteal folds, breast folds and external genitalia etc and may go unnoticed unless we look for it carefully. Seldom patients give history of a tick bite.

We report a 46 year old lady with Scrub Typhus from Adilabad district in Andhra Pradesh who presented to us with history of fever for 10 day duration associated with myalgia, loose stools and dry cough. She had no history of travel in recent past. Clinical examination revealed tachycardia, tachypnoea, mild bilateral pleural effusion and a typical eschar in the left lumbar region. Investigations revealed normal WBC count (9500/mm<sup>3</sup>), thrombocytopenia (62000/mm<sup>3</sup>), low serum albumin (2.3 gram%), hepatitis (SGOT and SGPT 176 and 122 IU/ml respectively) and mild bilateral pleural effusion. She was started on Doxycycline and Azithromycin and she became afebrile within 48 hours which is characteristic of Scrub Typhus. Her Weil-Felix test was positive for OX - K antigen in titres of 1:80 and her Scrub Typhus IgM ELISA was also positive. Based on the clinical picture of fever with eschar, dramatic therapeutic response to Doxycycline and Scrub Typhus serology positivity, a final diagnosis of Scrub Typhus with thrombocytopenia, hepatitis, hypoalbuminemia and bilateral pleural effusion was made.

Scrub Typhus is caused by *Orientia tsutsugamushi* which is a small, obligately intracellular, gram negative coccobacillus. It is the commonest Rickettsial infection seen in India. Scrub Typhus has a varied clinical spectrum including fever, rash, myalgia, eschar, shock, thrombocytopenia, hepatitis, acute respiratory distress syndrome and central nervous system manifestations. Eschar resembles a cigarette burn mark which is surrounded by erythema and appears at the site of chigger bite, the only larval stage of trombiculid mites which feed on human hosts. Eschar may be found in 10- 92% of patients with Scrub typhus but patients need to be examined carefully for the same.<sup>1,2</sup>

Immunofluorescence assay remains the gold standard technique and is the reference technique used in many laboratories.<sup>1</sup> Weil-Felix test, Scrub Typhus IgM ELISA and eschar PCR are other useful diagnostic modalities.<sup>1,2</sup> Doxycycline is the drug of choice which is cheap and effective. Prompt treatment is essential as delay in treatment can result in significant mortality.<sup>1</sup> Through this letter we hope to make physicians aware of this entity which is probably more widespread than considered and easily manageable provided it is diagnosed early and prompt treatment is initiated.

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