

## Clinical Images

### Infectious purpura fulminans



**Fig.** Photograph showing non-blanchable, purple coloured skin lesions with well defined margins (arrow heads) along with bullae (arrows) containing clear fluid suggestive of infectious purpura fulminans.

A 60 year old male patient was admitted to the medical intensive care unit (MICU) at the Sri Venkateswara Institute of Medical Sciences, Tirupati, Andhra Pradesh, in October 2013, with acute exacerbation of chronic obstructive pulmonary disease, acute respiratory failure requiring mechanical ventilatory support. While on treatment he developed new onset

fever and evidence of septic shock. *Pseudomonas* bacteraemia was evident on blood culture. Laboratory work-up revealed a low platelet count (25,000/ $\mu$ l); prolonged prothrombin time (test = 18.4 sec, control = 13.2 sec) and activated partial thromboplastin time (test = 38 sec, control = 32 sec); decreased serum fibrinogen level (80 mg/dl) which was suggestive of overt disseminated intravascular coagulation (DIC) with a score of 5 as per the International Society for Thrombosis and Haemostasis (ISTH) Diagnostic Scoring System<sup>1,2</sup>. The patient developed characteristic skin lesions over the right lower limb (Figure) and succumbed to his illness within 48 hours of onset of these lesions.

Purpura fulminans is an acute, often lethal syndrome characterized by DIC. It starts as well-demarcated erythematous macules that progress rapidly with haemorrhagic necrosis resulting in dark raised lesions, with vesicle or bulla formation<sup>3</sup>. It has been observed in severe acute bacterial infections caused by *Neisseria meningitidis*, *Streptococcus pneumoniae*, Group A and B streptococci, *Staphylococcus aureus*, *Haemophilus influenzae*, *Plasmodium falciparum* malaria and heritable protein C pathway defects<sup>4</sup>. *Pseudomonas* bacteraemia is an uncommon cause of purpura fulminans. It is important to recognize this uncommon cutaneous manifestation of systemic sepsis early and institute appropriate aggressive management as it is associated with a high mortality.

**J. Harikrishna & Alladi Mohan\***

Division of Pulmonary, Critical Care &  
Sleep Medicine, Department of Medicine  
Sri Venkateswara Institute of  
Medical Sciences, Tirupati 517 507  
Andhra Pradesh, India

\*For correspondence:

alladimohan@svims.gov.in  
alladimohan@rediffmail.com

### References

1. Levi M, Toh CH, Thachil J, Watson HG. Guidelines for the diagnosis and management of disseminated intravascular coagulation. British Committee for Standards in Haematology. *Br J Haematol* 2009; 145 : 24-33.
2. Taylor FB Jr, Toh CH, Hoots WK, Wada H, Levi M; Scientific Subcommittee on Disseminated Intravascular Coagulation (DIC) of the International Society on Thrombosis and Haemostasis (ISTH). Towards definition, clinical and laboratory criteria, and a scoring system for disseminated intravascular coagulation. *Thromb Haemost* 2001; 86 : 1327-30.
3. Edlich RF, Cross CL, Dahlstrom JJ, Long WB 3<sup>rd</sup>. Modern concepts of the diagnosis and treatment of purpura fulminans. *J Environ Pathol Toxicol Oncol* 2008; 27 : 191-6.
4. Chalmers E, Cooper P, Forman K, Grimley C, Khair K, Minford A, *et al*. Purpura fulminans: recognition, diagnosis and management. *Arch Dis Child* 2011; 96 : 1066-71.