Unilateral Purpuric Rash in a Patient with Acute Renal Failure

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A 72 year old patient with hypertension, chronic renal failure (plasma creatinine 170 µmol/L), polycythemia vera and paroxysmal atrial fibrillation had been treated for a week with methicillin for Group A staphylococcal left knee monoarthritis. Oligoanuric renal failure gradually developed (with plasma creatinine rising to 890 µmol/L), associated with non-tender extensive purpuric rash, selectively affecting the right leg. A very limited rash subsequently appeared on the other leg as well [Figure 1]. Skin biopsy disclosed leukocytoclastic vasculitis [Figure 2]. Ongoing bacteremia, endocarditis, interstitial nephritis and thrombotic thrombocytopenic purpura were excluded on clinical grounds. Transjugular kidney biopsy disclosed immunoglobulin A and C3 glomerular deposits, suggesting the diagnosis of Henoch-Schönlein purpura or post-infectious glomerulonephritis [1,2]. The patient was treated with hemodialysis, vancomycin and steroids, recovered and regained baseline kidney function.

The peculiar and worrisome initial unilateral purpuric rash could represent right leg staphylococcal end-arthritis. More likely, however, it reflects the impact of gravity on microvascular leak, selectively appearing in a dependent limb, with the immobilized and edematous, purpura-free left leg kept constantly elevated.

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Figure 1. Well-established purpuric rash, almost selectively affecting the right leg

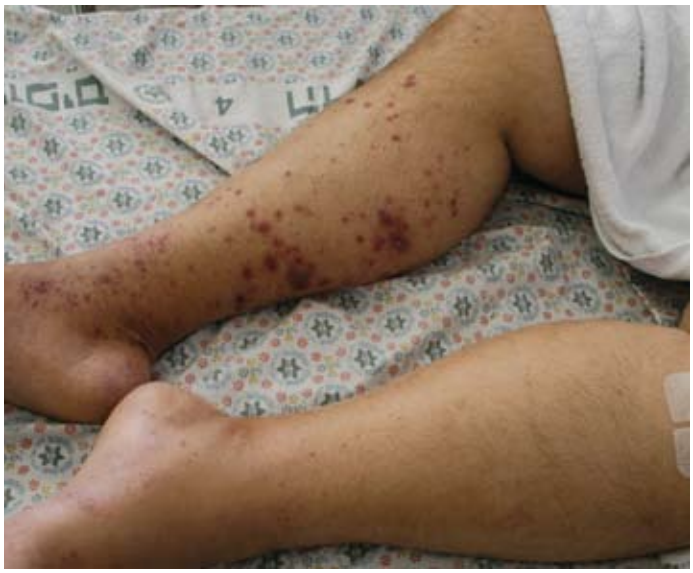

Figure 2. Cutaneous leukocytoclastic (hypersensitivity) vasculitis: dermal capillaries are involved, infiltrated by neutrophils, a few eosinophils and mononuclear cells, with prominent karyorrhexis