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Acral Necrosis Due to Treatment With Noradrenaline for Septic Shock☆

Necrosis acral secundaria al uso de noradrenalina por *shock* séptico

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A 75-year-old woman weighing 60 kg was admitted to intensive care for persistent hypotension (75/60 mmHg) due to septic shock caused by a urinary tract infection. She had a history of hypertension and dyslipidemia under pharmacological control and type 2 diabetes mellitus with good glycemic control under treatment with metformin 850 mg/d. Despite intensive fluid therapy, her blood pressure remained low, and after 8 hours at a level of under 80/60 mmHg, she required the administration of high-dose noradrenaline (0.5 μg/kg/min) through a peripheral line in the left forearm. Twenty-four hours later, she developed violaceous, blackish plaques on the fingertips of her left hand that progressed proximally over the following 72 hours, forming extensive necrotic plaques on all fingers (Fig. 1). Despite treatment with broad-spectrum antibiotics, high-dose vasoactive agents, and amputation of several phalanges, the patient died of multiorgan failure.

Ischemic skin necrosis due to vasoconstriction is an extremely serious and rare complication that usually affects critical patients on vasoconstrictor therapy. It occurs in patients with severe injection site vascular compromise or in association with Raynaud phenomenon and digital gangrene. Adrenaline, noradrenaline, and their derivatives have been described as potential causative agents. The pathogenic mechanism is related to high-dose administration and peripheral infusion. The incidence of ischemic skin necrosis has decreased significantly with the use of central venous accesses and catheters.

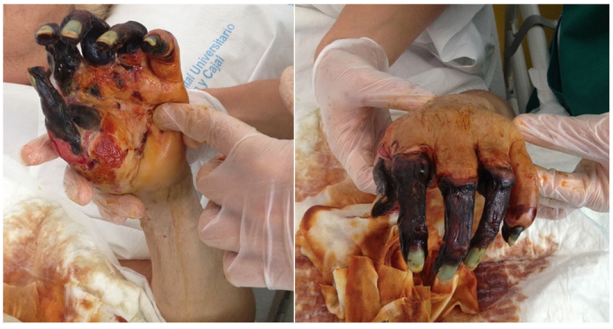

Figure 1

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