

PICTORIAL CME

Nicolau's Syndrome (Embolia Cutis Medicamentosa)

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Fig. 1: Arrow shows the site of injection, along with skin discoloration, reticulate pattern and distal purple bluish discoloration of hand and forearm



Fig. 2: Arrow shows patchy purple blue discoloration of the overlying skin of hand and forearm

Nicolau syndrome is an iatrogenic syndrome caused by intramuscular injection leading to variable degrees of tissue necrosis including the skin and deeper tissues and manifests as intense pain in the after injection along with purplish discoloration of the overlying skin, with or without a reticulate pattern. It has also been reported



Fig. 3: Skin showing blackening after two weeks

after subcutaneous, intravenous, and intraarticular injections. We report a case after intradermal injection of benzathine penicillin for skin allergy testing. Mr SG 24 years had rheumatic fever in childhood and had been receiving intramuscular injections of benzathine penicillin 12 lakh units every month for secondary prevention and each time skin allergy testing was being done. This time after skin allergy testing in right forearm he developed intense pain around injection site followed by local erythema, purple blue patchy and reticular areas of the overlying skin distally up to the finger tips (Figures 1, 2). Over the next two week, the skin has turned black with dehydration of the subcutaneous tissue, but hasn't separated from the margins (Figure 3). The right distal half



Fig. 4: Arrow shows appearance of dry gangrene two weeks later

of thumb has developed dry gangrene (Figure 4). Presumed pathogenesis is ischemic necrosis caused by arterial vasospasm and/or thrombosis and/or drug embolism but still is largely an unidentified pathogenesis. Skin biopsy was not done as the diagnosis is clinical. There is no standard guideline for its management. He was managed with heparin and hydrocortisone. He is under close follow up and may need debridement/plastic surgery later. Clinicians must be aware of this iatrogenic adverse reaction and be cautious in the use of proper injection procedures, including appropriate needle length, in order to minimize complications.

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