We continued. No explanation can be afforded this later finding.


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Splinter Hemorrhages Associated with An Indwelling Brachial Artery Cannula

To the Editor:

Continuous intra-arterial cannulation is widely used in intensive care practice for hemodynamic monitoring and for obtaining frequent blood samples. While serious complications are rare, ischemic changes due to thrombosis, peripheral embolization and infection have been described.\(^1\),\(^2\) Splinter hemorrhages are exceptional complications that have been reported in association with infection.\(^3\) We describe a case of splinter hemorrhages complicating brachial artery cannulation unassociated with trauma or infection.

CASE REPORT

A 57-year-old man with longstanding severe essential hypertension refractory to treatment was admitted to the hospital for direct intra-arterial monitoring of blood pressure for 24 hours while under no more than 0.2 g. 5.1 cm Teflon cannula (Quik-Cath, Travenol Laboratories) was inserted percutaneously into the left brachial artery. After 24 hours, multiple splinter hemorrhages appeared at the distal region of the nail beds of the left hand (Fig 1). The patient was asymptomatic, afebrile and there were no clinical signs of local or systemic infection. The left radial and brachial pulses before and after removal of the catheter were full and unchanged.

DISCUSSION

Nontraumatic splinter hemorrhages are found in bacterial endocarditis and various other conditions, both medical and dermatologic.\(^4\),\(^5\) Their pathogenesis is not completely understood, but infective emboli and immunologic mechanisms have been postulated. Splinter hemorrhages have been reported resulting from multiple radial arterial punctures unassociated with local infection\(^6\) and as a complication of staphylococcal infection of an indwelling radial arterial catheter.\(^7\) In our patient there was no evidence of infection, and the arterial puncture itself was uncomplicated. We believe that multiple small emboli are the most likely explanation for this rare complication. It is possible that in our patient, longstanding uncontrolled hypertension, and consequent atherosclerotic vascular changes, may have predisposed to the genesis of splinter hemorrhage.

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FIGURE 1