Abstract:

Background: Although intravenous (IV) infiltration is relatively common, data regarding complications and outcomes of this problem remain limited. In addition, there is wide variation in institutional protocols for the management of IV infiltrations. Through retrospective review, we aim to delineate complications and outcomes, and propose an algorithm for the management of these injuries.

Methods: We performed a retrospective review of all patients who had an IV infiltration at a tertiary care center’s inpatient and outpatient facilities between January 1, 2016, and December 31, 2018.

Results: In all, 479 patients with 495 infiltrations were included, with a mean age of 36.7 years. The upper extremity was involved in 89.6% of events. Of all the events, 8.6% led to a superficial soft tissue infection, 3.2% led to necrosis or eschar formation, and 1.9% led to ulceration or full-thickness wound formation. There were zero cases of compartment syndrome. Only 5.1% resulted in any long-term defects; none resulted in a functional defect of the extremity. Patients with vascular disease did not experience worse outcomes compared with healthy individuals. Plastic or orthopedic surgery was consulted in 25.3% of events. No emergent surgical intervention was required, 7 (1.4%) required bedside procedures, and 7 (1.4%) patients underwent nonacute operations.

Conclusions: A specialist was consulted in about one-quarter of IV infiltrations, yet none were surgical emergencies. Instead, most complications could be monitored and managed by a primary team. Therefore, we propose algorithms involving nursing staff, wound care teams, and primary physicians with limited specialist consultation to manage these injuries.

Reference: