A Rare Case of Acute Blood Loss Induced Chronic Ischemic Neuropathic Pain - case report

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Chronic ischemic neuropathic pain is most commonly caused by peripheral artery disease. Acute blood loss induced chronic neuropathic pain, however, is a rare sequelae.

A 36-year-old female patient with a past medical history pertinent for end stage renal disease status post kidney transplant, hypertension, and chronic anemia, presented to pain clinic with right lower extremity pain for 8 months following right femoral artery-vein-graft (AVG) site blown out status post repair. Her pain radiated from knee to ankle, both anteriorly and posteriorly, described as intermittent and electric-shock like, accompanied with tingling and numbness. She rated her pain 8 out of 10 which significantly affected her ability to walk and care for her young children. Pain was not improved with cold or heat, acetaminophen, or opioids. She denied weakness or claudication. She had decreased sensation to light touch in L3 to S2 dermatomes in distal right lower extremity, with normal muscle strength and normal reflex. Eight months prior to the clinic visit, she was brought to emergency room due to hemorrhagic shock secondary to acute blood loss from infected right femoral AVG site. She underwent emergent right femoral artery repair with interposition vein graft from left femoral vein. Estimated blood loss was 1000ml. Her post-operative course was complicated with cardiac arrest after the initial surgery status post return of spontaneous circulation and right retroperitoneal hematoma with another 1000ml blood loss. Her hemoglobin nadir was 4.8g/dl during that admission, as compared to her baseline around 10g/dl. She received multiple blood products transfusion and by the time of discharge, hemoglobin level returned to baseline. She then developed the right lower extremity pain as described above, initially considered to be surgical site related however persisted long after complete healing of surgical wounds, thus referred to the pain clinic. She was diagnosed with chronic neuropathic pain secondary to ischemia and started on low dose gabapentin. She is scheduled to return for right lumbar sympathetic block for further pain management.

Painful neuropathy induced by acute ischemia has been studied in animal models, however not commonly reported in patients. This case illustrated the potential development of chronic ischemic neuropathy from acute blood loss, which was easily mistaken as surgical or wound pain. Early recognition of the neuropathy is important to institution proper treatment and prevent long term debilitation.