



Patient Safety: EMG/NCS and Risk of Bleeding

From the AANEM Quality and Patient Safety Committee

Electrodiagnostic testing (needle electromyography) in patients with bleeding diathesis is associated with greater risk of bleeding when compared to general population. It is recommended that caution should be used when deciding on electrodiagnostic testing in patients with platelet counts less than 50,000 and INR greater than 1.5-2.0. Currently, there is no data on the risks associated with newer anticoagulants or on intravenous heparin. In the literature, there are a few reported cases of EMG complications related to bleeding diathesis. In 2006, survey of 60 academic EMG laboratories reported 5 serious bleeding complications and practices of limiting needle examination varied widely among the participants. While the risk of symptomatic bleeding is low, examining physicians must remain cognizant of potential complications. It is not recommended to routinely stop anticoagulants or antiplatelet medications for EMG, or to routinely defer EMGs in anticoagulated patients.

Question: What is the risk of intramuscular hematoma after needle electromyography?

- A. 4%
- B. 0.84%
- C. 1.35%
- D. 0.62%

Answer: C) 1.35%

Sources:

London Z. Safety and pain in electrodiagnostic studies. *Muscle Nerve* 55:149-59, 2017.

Gruis KL et al. Survey of electrodiagnostic laboratories regarding hemorrhagic complications from needle electromyography. *Muscle Nerve* 34:356-58, 2006.

Author: Sasha Zivkovic, MD