

Anticoagulants and Spine Interventions FactFinder

Committed to providing helpful information to our members about key patient safety issues, the International Spine Intervention Society's Patient Safety Committee has developed a FactFinder series. FactFinders will explore and debunk myths surrounding patient safety issues. The intent of this FactFinder is to address the use of anticoagulants in patients undergoing interventional spine procedures.

Much of the content of this FactFinder has been excerpted from the 2nd edition of the International Spine Intervention Society Practice Guidelines ¹, in press at the time of this publication.

Myth: Anticoagulants must be ceased, or their doses reduced substantially, prior to performing any interventional spine procedures.

Fact: The physician must weigh the risks of performing the specific procedure on the anticoagulated patient with the risks incurred by ceasing or reducing the anticoagulant.

In the past, physicians planning to perform minimally-invasive, spinal diagnostic or treatment procedures on patients who were taking anticoagulants were advised to cease those medications before the procedure. This advice required that the physician identify the anticoagulant drug, tell the patient to cease taking it at an appropriate time before the procedure in order to normalize coagulation and then check the coagulation status of the patient before they have the procedure. Ostensibly, the concern was that spinal complications, attributable to the passage of a needle or electrode through a blood vessel, could occur in patients who remained anticoagulated. Data that have recently become available provide a basis for reconsidering this advice. There is also evidence that ceasing or reducing anticoagulant therapy carries its own risks ².

The question is whether to cease anticoagulants or not. The considerations include the theoretical risk of complications, the epidemiology of the actual risks, the nature of possible complications, the nature of the medications being used and the need for the intended procedure.

Table 1 summarizes recommendations relative to use of anticoagulants for various spinal interventions. These recommendations pertain to procedures performed in accordance with specific techniques described in the International Spine Intervention Society guidelines. The physician performing the procedure must be appropriately trained and qualified, and have a deep understanding of the procedure to be undertaken, along with the nature and treatment of the condition for which the patient is taking anticoagulants. Additionally, any change in the

patient’s regimen of medications should be undertaken in consultation with the physician responsible for their prescription, in case there are insights, considerations or precautions of which the patient or the physician about to perform the procedure is unaware.

Recommendations Regarding Use of Anticoagulants for Interventional Spine Procedures

	WITH ANTICOAGULANTS		CEASING ANTICOAGULANTS		
	Risk of Spinal Complications	Nature of Spinal Complications	Risk of Systemic Thrombotic Complications	Nature of Potential Systemic Thrombotic Complications	Recommendation
Extraspinal	very low	minor	very low	severe	continue anticoagulants
RF Neurotomy	unknown	minor	very low	severe	continue anticoagulants
Lumbar Disc Stimulation	unknown, but theoretically low	minor	low	severe	continue anticoagulants
Cervical or Thoracic Disc Stimulation	unknown, but theoretically low	primarily minor	low	severe	anticoagulants = relative contraindication*
Lumbar TFESI	very low	potentially significant	very low	severe	anticoagulants = relative contraindication*
Cervical or Thoracic TFESI	unknown	potentially serious	very low	severe	anticoagulants = relative contraindication*
Interlaminar ESI	3x greater	potentially serious	very low	severe	anticoagulants = relative contraindication*

*Relative contraindication means:

Physicians should exercise discretion not only on whether or not to cease anticoagulants, but also whether or not the presumed therapeutic benefit of the procedure justifies the risk of ceasing anticoagulants.

All patients who undergo spinal diagnostic or treatment procedures while on anticoagulants should be diligently monitored for the possible development of paraspinal or epidural hematoma, and action should be taken to recognize and treat potential complications early.

Extra care should be exercised in monitoring an anticoagulated patient in whom vascular penetration is demonstrated during the conduct of a procedure.

References:

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Additional References - Cited in the International Spine Intervention Society Practice Guidelines, 2nd edn.

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