

ANTICOAGULATION GUIDELINES FOR NEURAXIAL OR PERIPHERAL NERVE PROCEDURES

Guidelines to Prevent Spinal Hematoma following Epidural/Intrathecal/Spinal Procedures and Perineural Hematoma following Peripheral Nerve Procedures

ATTENTION! WHEN CAN YOU SAFELY DO NEURAXIAL/PERIPHERAL NERVE PROCEDURES OR GIVE ANTICOAGULANTS? <i>Neuraxial routes include epidural and intrathecal infusions, implanted intrathecal pumps, and spinal injections.</i> <i>Peripheral routes include all peripheral nerve and plexus infusions. NOTE: Bloody tap/procedure? Anesthesia to call Pain Service</i>			
MEDICATION	PRIOR TO NEURAXIAL/NERVE PROCEDURE Minimum time between last dose of anticoagulant and spinal injection OR neuraxial/nerve catheter placement	WHILE NEURAXIAL/NERVE CATHETER IN PLACE Restrictions on use of anticoagulants while neuraxial/nerve catheters are in place and prior to their removal	AFTER NEURAXIAL/NERVE PROCEDURE Minimum time between neuraxial/nerve catheter removal OR spinal/nerve injection and next anticoagulant dose
ANTICOAGULANTS FOR VTE PROPHYLAXIS			
heparin unfractionated 5000 units Q8H or Q12H	May be given; no time restrictions for catheter placement/removal or spinal injections Do NOT call Pain Service		
heparin unfractionated 7500 units SQ Q8H	8 hrs	CONTRAINDICATED while catheter in place: may NOT be given unless approved by Pain Service Attending	4 hrs
dalteparin (Fragmin) 5000 units SQ QDay	12 hrs	May be given BUT: •Must wait 8 hrs after catheter PLACEMENT before giving dose •Must wait 12 hrs after last dose before REMOVING catheter	4 hrs
enoxaparin (Lovenox) 40mg SQ QDay	(longer in renal impairment)		
enoxaparin (Lovenox) 30mg SQ Q12H or 40mg SQ Q12H	12 hrs (longer in renal impairment)	CONTRAINDICATED while catheter in place: may NOT be given unless approved by Pain Service Attending	4 hrs
fondaparinux (Arixtra) 2.5mg SQ QDay	48 hrs (longer in renal impairment)		
rivaroxaban (Xarelto) 10mg po QDay	48 hrs (longer in renal impairment)	May be given BUT: •Must wait 8 hrs after catheter PLACEMENT before giving dose •Must wait 12 hrs after last dose before REMOVING catheter	6 hrs (per manufacturer recommendations)
AGENTS USED FOR FULL SYSTEMIC ANTICOAGULATION			
apixaban (Eliquis)	48 hrs (longer in renal impairment)	CONTRAINDICATED while catheter in place: may NOT be given unless approved by Pain Service Attending	5 hrs (per manufacturer recommendations)
dabigatran (Pradaxa)	72 hrs (longer in renal impairment)		4 hrs
dalteparin (Fragmin) 200 Units/kg SQ QDay or 100 Units/kg SQ Q12H	24 hrs (longer in renal impairment)		
enoxaparin (Lovenox) 1.0 - 1.5mg/kg SQ QDay or 1mg/kg SQ Q12H	24 hrs (longer in renal impairment)		
fondaparinux (Arixtra) 5-10mg SQ qday	72 hrs (longer in renal impairment)		6 hrs (per manufacturer recommendations)
heparin unfractionated IV infusion or full dose SQ	when aPTT < 40 sec		
rivaroxaban (Xarelto) 15-20mg po qday	48 hrs (longer in renal impairment)		4 hrs
warfarin (Coumadin)	when INR < 1.5		

Use with UWMC Nursing Epidural Policy and Procedure and Acute Pain Service Guidelines for Neuraxial/Peripheral Nerve Catheters

Reference:Horlocher TT et al. Regional anesthesia in the patient receiving antithrombotic or thrombolytic therapy. American Society of Regional Anesthesia and Pain Medicine Evidence Based Guidelines (third edition). Reg Anesth Pain Med 2010; 35:64-101

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DIRECT THROMBIN INHIBITORS, INJECTABLE			
argatroban IV continuous infusion	when DTI assay < 40 or aPTT < 40 sec	CONTRAINDICATED while catheter in place: may NOT be given unless approved by Pain Service Attending	4 hrs
bivalirudin (Angiomax) IV continuous infusion			
ANTIPLATELET AGENTS			
Aspirin or NSAIDS	May be given; no time restrictions for catheter placement or removal Do NOT call Pain Service		
abciximab (Reopro)	48 hrs	CONTRAINDICATED while catheter in place: may NOT be given unless approved by Pain Service Attending	4 hrs
aspirin/dipyridamole (Aggrenox)	7 days		
clopidogrel (Plavix)	7 days		
eptifibatide (Integrelin)	8 hrs (longer in renal impairment)		
prasugrel (Effient)	7 days		
ticagrelor (Brilinta)	7 days		
tirofiban (Aggrastat)	8 hrs (longer in renal impairment)		
THROMBOLYTIC AGENTS			
alteplase (TPA) 1mg dose for catheter clearance	May be given; no time restrictions for catheter placement or removal (Maximum dose 4mg/24 hours)		
alteplase (TPA) full dose for stroke, MI, etc	10 days	CONTRAINDICATED while catheter in place: may NOT be given unless approved by Pain Service Attending	10 days