



ANTICOAGULATION GUIDELINES FOR NEURAXIAL PROCEDURES

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

**PAIN SERVICE
ATTENDING APPROVAL
REQUIRED FOR USE OF
ANY ANTITHROMBOTIC
AGENT OUTSIDE THESE
GUIDELINES**

Bloody Tap? Call Pain Service

ATTENTION! WHEN CAN YOU SAFELY DO NEURAXIAL PROCEDURES OR GIVE ANTICOAGULANTS?		
Minimum time between last dose of anticoagulant and when spinal injection/catheter placement or peripheral nerve injection/catheter placement can occur * longer in patients with renal impairment	Use of Antithrombotic Agents in Patients with Indwelling Neuraxial Catheters	Minimum time between spinal injection/catheter removal or peripheral nerve injection/catheter removal and when next dose of anticoagulant can be given

TRADITIONAL ANTICOAGULANTS

warfarin	when INR < 1.5	CONTRAINDICATED while catheter in place	2 hours	
heparin full dose IV	when aPTT < 40			
heparin full dose (>5000 Units) SQ bid or TID	when aPTT < 40			
heparin minidose (5000 Units) SQ bid or TID	May be given; No time restrictions for catheter placement or removal			
drotrecogin alfa (<i>Xigris</i>)	24 hours	CONTRAINDICATED while catheter in place	2 hours	
fondaparinux (<i>Arixtra</i>) ≤2.5mgSQ qd (prophylaxis)	48 hours*		2 hours	
fondaparinux (<i>Arixtra</i>) 5-10mg SQ qd (full dose)	72 hours*		2 hours	
dalteparin (<i>Fragmin</i>) 200 U/kg SQ qd; 100 U/kg SQ q12h (full dose)	24 hours*		2 hours	
enoxaparin (<i>Lovenox</i>) 1mg/kg SQ bid; 1.5mg/kg SQ qd (full dose)	24 hours*		2 hours	
enoxaparin (<i>Lovenox</i>) 30mg SQ bid or 40mg SQ bid (prophylaxis)	12 hours*		2 hours	
dalteparin (<i>Framin</i>) 5000 units SQ qd (prophylaxis)	12 hours*		May be given. Wait 6-8 hours after catheter placement before giving next dose.	2 hours
enoxaparin (<i>Lovenox</i>) 40mg SQ qd (prophylaxis)	12 hours*			2 hours

DIRECT THROMBIN INHIBITORS

argatroban	when DTI assay < 40 or aPTT < 40	CONTRAINDICATED while catheter in place	2 hours
bivalirudin (<i>Angiomax</i>)			
lepirudin (<i>Refludan</i>)			
dabigatran (<i>Pradaxa</i>)			

ORAL ANTIPLATELET AGENTS

aspirin/NSAIDS	May be given, No time restrictions		
clopidogrel (<i>Plavix</i>)/prasugrel (<i>Effient</i>)	7 days	CONTRAINDICATED while catheter in place	2 hours
ticlopidine (<i>Ticlid</i>)	10-14 days		2 hours

GP IIB/IIIA INHIBITORS

abx cimab (<i>Reopro</i>)	48 hours	CONTRAINDICATED while catheter in place	2 hours
eptifibatid (<i>Integrilin</i>)	8 hours*		2 hours
tirofiban (<i>Aggrastat</i>)	8 hours*		2 hours

THROMBOLYTIC AGENTS

alteplase (TPA) Full dose for stroke, MI, etc	10 days	CONTRAINDICATED while catheter in place	10 days
alteplase (TPA) 2mg dose for catheter clearance	May be given, No time restrictions (maximum dose 4mg/24 hrs)		

Use with UWMC Nursing Epidural Policy and Procedure (Sheryl Wyant), UWMC Anticoagulation Services www.uwmcacc.org (Ann Wittkowsky), Acute Pain Service (Dermot Fitzgibbon) and on line Clinical Toolkit: depts.washington.edu/medical/clinicalresources (Tom Staiger). Reference: Horlocker 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.