New anticoagulants and antiplatelet agents in perioperative period: Recommendations and controversies!

Sir,

There are number of guidelines published by several reputed regional anaesthesia societies worldwide regarding safe practice of regional anaesthesia for performing central neuraxial blockade in patients on anticoagulants. There is no dispute or controversy while performing regional anaesthesia when the patient is being treated with unfractionated heparin, low molecular weight heparin or oral Vitamin K antagonists (warfarin, acenocoumarol).[1] However, there is a lack of consensus among different societies when neuraxial block is contemplated in patients on new anticoagulants, for example, rivaroxaban, dabigatran, apixaban, fondaparinux for approved and off-label indications [Table 1].[2-4]

The duration of stopping of some anticoagulants before placing a neuraxial catheter and for removal of catheter is not uniform in the guidelines given by the American Society of Regional Anaesthesia (ASRA), European Society of Regional Anaesthesiology and The Association of Anaesthetists of Great Britain and Ireland. The timing of catheter insertion and removal is planned according to the plasma half-life and the elimination half-life of a drug. The half-lives of these anticoagulants tend to prolong further in renal impairment. ASRA does not recommend the use of central neuraxial block and catheter placement in a patient on fondaparinux prophylaxis or treatment.

The reason for knowing all the existing guidelines, in a nutshell, is to practice safe regional anaesthesia so as to have a minimal risk of haemorrhagic complications such as epidural and spinal haematomas which has catastrophic outcomes. The knowledge of the available guidelines is important from medico-legal point of view in a situation where the anaesthesiologist gets involved in a medico-legal case involving neurological complications after regional anaesthesia.

These guidelines should be considered as recommendations and consensus statements by the societies that represent the experience of renowned authorities and experts in field neuraxial anaesthesia and anticoagulation associated with international societies. In controversial situations, every anaesthesiologist should individualise the regional anaesthesia plan. Proper documentation, adequate post-operative monitoring, informed consent and prompt intervention in case of a complications should be the approach while dealing with the patients on anticoagulants. The clinician should be careful while performing peripheral nerve blocks, interventional spine and pain procedures on patients on above-mentioned drugs. Although ASRA has come out with consensus guidelines, the experts have suggested to make decisions based on half-life of drug, concomitant use of other drugs interfering with coagulation and risk versus benefit ratio.[5]

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Table 1: New anticoagulants, antiplatelets and recommendations by international societies

Drug	Duration for which drug needs to be stopped before catheter placement/removal			Duration after which drug can be restarted after catheter removal		
	ASRA	ESRA	AAGBI	ASRA	ESRA	AAGBI
Dabigatran	5 days	34 h	48-96 h	6 h	4-6 h	6 h
Apixaban	3 days	26-30 h	24-48 h	6 h	4-6 h	6 h
Rivaroxaban	3 days	22-26 h	48 h	6 h	4-6 h	6 h
Prasugrel	7-10 days	5 days	7 days	6 h	6 h	6 h
Ticagrelor	5-7 days	5 days	5 days	6 h	Immediately	6 h
Fondaparinux	-	24 h	36-42 h	-	6-12 h	12 h

The difference in the duration of stopping of anticoagulants and antiplatelets before neuraxial catheter placement as recommended by different Anaesthesia and Regional Anaesthesia Societies. ASRA does not recommend use of central neuraxial block and catheter placement in a patient on fondaparinux prophylaxis or treatment. ASRA – American Society of Regional Anaesthesia; ESRA – European Society of Regional Anaesthesiology; AAGBI – Association of Anaesthetists of Great Britain and Ireland

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