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## **Anticoagulants and antiplatelet drugs during elective phacoemulsification cataract surgeries under topical anesthesia with corneal incision: A suggestive outline based on present evidence and recommendations in the Indian context**

Dear Editor,

In India, with increasing cataract surgeries in patients on anticoagulant/antiplatelet drugs, the decision to continue/

discontinue these drugs is becoming crucial. Continuation may increase the risk of bleeding, while discontinuation may be associated with thromboembolism. Decision-making is getting complex considering the variety of anticoagulants/antiplatelet drugs used, the risk profile of patients, the anesthetic technique employed, and the disparity or absence of guidelines. This write-up is an attempt to give a simple suggestive outline in the Indian context based on present evidence.

Regarding the use of antiplatelet agents, Aspirin or Clopidogrel are used singly or in combination. As per VISION 2020 guidelines, oral antiplatelet agents need not be stopped for cataract surgery.<sup>[1]</sup> Phacoemulsification cataract surgery by a skilled surgeon using a clear corneal incision under topical anesthesia involves a low risk of intraoperative bleeding and

**Table 1: A simple outline (based on current scientific evidence) to continue/discontinue anticoagulant/antiplatelet in phacoemulsification cataract surgery under topical anesthesia with a corneal incision by a skilled surgeon**

Drugs	Recommendation
Antiplatelet agents Aspirin or Clopidogrel or combined.	No need to discontinue before surgery.
Anticoagulant agents Vitamin K antagonist such as Warfarin.	A) Check PT or INR. If PT is less than 18 or INR in the normal range, proceed for surgery without discontinuation. B) If PT or INR is in the higher range, stop warfarin at least 4 days before the operation and start with a bridging therapy with low molecular weight heparin or unfractionated heparin in patients at high risk of thromboembolism. Check whether PT/INR is in normal range before elective operation. <sup>[4]</sup> C) If stopped, warfarin can be restarted 12-24 h after surgery.
Low molecular weight heparin, LMWH (S/C) or unfractionated heparin, UH (IV) in therapeutic doses.	A) the Last dose of LMWH should be 12 h before surgery. Last dose of unfractionated heparin 4-6 h before surgery. B) LMWH may be restarted within 24 h of surgery. UH may be restarted 6-12 h after surgery.
Newer oral anticoagulants (NOACs) such as Apixaban, Rivaroxaban, and Dabigatran.	Discontinue NOACs 1/2 days before surgery. May be continued during surgery. <sup>[5]</sup>

does not require stopping single or combined antiplatelet therapy with Aspirin and Clopidogrel.<sup>[2]</sup>

In patients on oral anticoagulants such as warfarin, as per VISION 2020 guidelines, the prothrombin time (PT) is to be checked and proceed for surgery if PT is less than 18 s.<sup>[1]</sup> If in the higher range, a stoppage of at least 4 days with bridging therapy with a therapeutic dose of low-molecular-weight heparin or unfractionated heparin may be recommended.<sup>[3]</sup> This is more relevant in patients at high risk of thromboembolism such as those with atrial fibrillation, venous thromboembolism within the last 3 months, presence of a mechanical mitral valve, and hypercoagulable states such as cancer or low left ventricular ejection function (<30%).<sup>[4]</sup> Warfarin if stopped can be restarted 12–24 h after surgery. The newer oral anticoagulants (NOACs) can be stopped 1–2 days prior to the elective surgery considering their relatively short half-life, though Patel and De Klerk<sup>[5]</sup> recommend their continuation.

A simple outline represented in Table 1.

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## Conflicts of interest

There are no conflicts of interest.

**Anirban Pal**

Consultant Anesthesiologist, Apollo Medical Center, Kolkata, West Bengal, India

Correspondence to: Dr. Anirban Pal, 43/6/5 Jheel Road, Kolkata, West Bengal - 700 031, India. E-mail: pal.anirban1@gmail.com

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