

Optimizing Antiplatelet Therapy Around Noncardiac Surgical Procedures

Chabbar Sara¹, Benzakour Maria², Khamir Asmaa³, Anas Mounir⁴, Aziz Bouhour⁵

^{1,2,3,4,5} Department of Anesthesia and Intensive Care, Ibn Rochd University Hospital, Casablanca, Morocco, Faculty of Medicine and Pharmacy, Casablanca.

ABSTRACT:

Objective: The perioperative management of antiplatelet agents (APA) in coronary patients remains a challenge for anesthesiologists and cardiologists due to the delicate balance between bleeding and thrombotic risks. This study aimed to assess current practices at CHU IBN ROCHD in Casablanca.

Methods: A cross-sectional observational study was conducted between September and December 2023 among anesthesiologists and cardiologists, using an electronic questionnaire. Data were analyzed descriptively using R Studio software.

Results: Among 93 participants (54% anesthesiologists, 46% cardiologists), wide variability in practice was observed. Most anesthesiologists discontinued aspirin even in self-medication cases, whereas cardiologists favored a more individualized approach. Management of patients under dual antiplatelet therapy (DAPT) was inconsistent, especially in emergency surgery settings. Specialist consultation was reported in only 54% of cases by anesthesiologists.

Conclusion: This study highlights the lack of consensus and the urgent need for interdisciplinary coordination and locally adapted protocols to improve perioperative safety in patients receiving antiplatelet therapy.

KEYWORDS : Perioperative management; Antiplatelet agents; Aspirin; Dual antiplatelet therapy; Cardiovascular risk.

INTRODUCTION

Antiplatelet agents (APAs) are essential in the prevention of arterial thrombotic events, particularly after acute coronary syndromes or stent placement. However, their management in the perioperative period in patients undergoing non-cardiac surgery remains a major challenge. Clinicians must strike a balance between the potential risk of thrombosis if treatment is interrupted and the risk of bleeding if treatment is continued. The aim of this study is to evaluate perioperative management practices for APAs at the IBN ROCHD University Hospital, focusing on the specialties of anesthesiology and intensive care and cardiology.

MATERIALS AND METHODS

A cross-sectional observational study was conducted among 93 practitioners, including 50 anesthesiologists and 43 cardiologists. Participants completed a questionnaire about their professional profile, clinical experience, and frequency of exposure to patients on AAP, perioperative treatment decisions, and knowledge of national and international recommendations. Statistical analysis was performed using R Studio software.

RESULTS

The study included 93 healthcare professionals working at the IBN ROCHD University Hospital in Casablanca, comprising 50 anesthesiologists and intensive care specialists (53.8%) and 43 cardiologists (46.2%). The majority of participants were residents in training, reflecting a young and clinically active population. More than 86% of respondents reported regularly encountering patients on antiplatelet therapy (APT), and among them, more than half reported encountering patients who self-medicated with aspirin. In cases of non-prescribed use, 70% of anesthesiologists and 100% of cardiologists reported discontinuing aspirin prior to surgery, often without seeking prior specialist advice.

Regarding coordination between the two disciplines, 54% of anesthesiologists and intensive care physicians say they systematically refer patients with coronary stents to a cardiologist for preoperative advice, which is confirmed by 88% of the cardiologists surveyed. The perception of bleeding risk varies depending on the type of surgery. Neurosurgery, thoracic surgery, and cancer surgery are mostly seen as having a high bleeding risk. On the other hand, surgery on the front part of the eye or hip surgery are considered low risk by most people. In the event of a surgical emergency requiring rapid intervention in a patient on AAP, 96% of anesthesiologists and 91% of cardiologists believe that a platelet transfusion may be considered. Furthermore, the

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risk of thrombosis is considered high in patients who have recently had stents fitted or who have recently had acute coronary syndrome, prompting the majority to recommend prolonged DAPT (dual antiplatelet therapy) before any scheduled non-cardiac surgery. In practical terms, the preoperative management of antiplatelet monotherapy differs significantly between the two groups. Anesthesiologists tend to discontinue treatment more readily in the absence of an explicit recommendation, while cardiologists place greater emphasis on individualization and the continuation of aspirin for secondary prevention. For time-sensitive surgery, including cancer surgery or emergency visceral surgery, a reduction in DAPT is sometimes considered, but rarely according to formalized protocols. Finally, the recommended duration of discontinuation varies depending on the molecule: if discontinuation is decided, aspirin is suspended on average 5 to 7 days before the procedure, clopidogrel 5 days, ticagrelor 5 to 7 days, and prasugrel up to 7 days.

DISCUSSION

The perioperative management of antiplatelet agents is now a crucial issue in the context of an aging population and an increase in the number of coronary patients undergoing prolonged antiplatelet therapy [1]. The results of this study highlight marked heterogeneity in practices between anesthesiologists and cardiologists, as well as partial or even incomplete application of international recommendations. Several points of divergence appear from the initial assessment. The majority of anesthesiologists discontinue aspirin even when self-medicating without assessing the consequences, exposing patients to an avoidable thrombotic risk, particularly in the case of secondary prevention [2]. This behavior can be explained by the fear of operative bleeding, especially since certain procedures such as neurosurgery or ENT surgery are perceived as having a high risk of hemorrhage [3,4].

Type de chirurgie		Risque hémorragique			Commentaires
		Élevé	Moyen	Faible	
Neurochirurgie					Chirurgie intracrânienne et spinale: arrêt de tous les AAP nécessaire
Ophtalmologie	Segment antérieur (cataracte)				Chirurgie des structures avasculaire (cataracte): possible sous AAP
	Segment postérieur (rétine) et chirurgie extra-oculaire				Chirurgie rétinienne et chirurgie strabisme: arrêt le plus souvent des AAP
Digestive					Risque très variable en fonction de la chirurgie laparoscopie, cholécystectomie appendicectomie: faisable sous AAP
Orthopédique					Chirurgie possible sous AAP
Chirurgie carcinologique					Risque élevé si large plan de décollement
Chirurgie urologique					Risque hémorragique élevé pour la chirurgie prostatique

Table 1: Bleeding risk according to type of surgery

Conversely, the cardiologists surveyed emphasize the importance of continuing aspirin for secondary prevention and adapting the strategy according to the balance between thrombotic and bleeding risk. This approach is consistent with the ESC 2023 and SFAR recommendations, which recommend continuing aspirin in stented patients at high risk of thrombosis, except in cases of surgery with a high risk of bleeding [5,6]. Premature discontinuation of DAPT is associated with an increased rate of adverse cardiovascular events, particularly stent thrombosis, with mortality rates of up to 45% [7].

Another critical issue is the management of emergency situations. The vast majority of practitioners consider platelet concentrate transfusion to partially antagonize the effect of APAs, but without a standardized institutional protocol. However, this practice should be limited to cases where the risk-benefit ratio is clearly favorable, and ideally guided by platelet function tests, which are rarely available in routine practice [8].

The variability observed in preoperative withdrawal times depending on the molecules also highlights a lack of standardization. Recent studies suggest specific withdrawal periods: 5 days for clopidogrel, 3 to 5 days for ticagrelor, and up to 7 days for

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prasugrel, in accordance with the half-life and irreversible platelet effect of these molecules [9]. However, these data must be integrated into a personalized approach that takes into account the type of stent, the initial indication for DAPT, and the timing of the last percutaneous coronary intervention.

The lack of a culture of multidisciplinary consultation is another identified obstacle. Only half of anesthesiologists report systematically seeking a cardiology opinion for coronary patients, which can lead to inappropriate unilateral decisions. Better coordination is essential, especially in complex cases or when the patient is at high risk of thrombosis [10].

Finally, this study highlights the urgent need to develop validated local algorithms adapted to the hospital setting, based on the recommendations of learned societies such as the ESC, AHA, and SFAR. These tools must be simple, accessible, and promoted through regular training in order to reduce interindividual variability and improve patient safety.

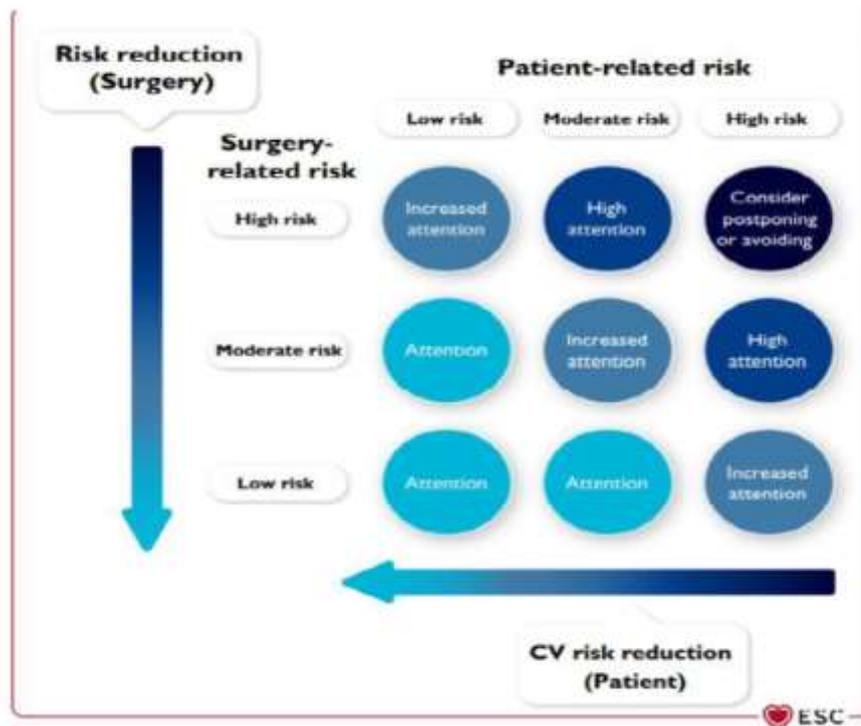


Figure 1: Total Risk Is An Interaction Between Patient-Related Risk And Surgery-Related Risk.

CONCLUSION

Perioperative management of antiplatelet agents in patients undergoing non-cardiac surgery requires a collaborative, rigorous, and individualized approach. The development of local protocols based on international recommendations, as well as ongoing training for professionals, are essential for standardizing practices and reducing thrombohemorrhagic complications.

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