ABSTRACT

Objective: Pediatric patients who have undergone the Fontan procedure are often on a long-term aspirin regimen which can complicate perioperative management. In high risk procedures such as adenotonsillectomy, hemorrhage can be a significant complication and aspirin use may increase the risk. We report the case of a patient with Fontan palliation who underwent adenotonsillectomy and presented with postoperative hemorrhage. We also review current literature on the topic of perioperative management of aspirin.

Methods: PubMed was searched for guidelines, case reports, and reviews on pediatric Fontan patients, adenotonsillectomy, and perioperative aspirin cessation.

Results: Current literature lacks a consensus on perioperative management of aspirin for patients on a long term aspirin regimen. Pediatric patients who have undergone the Fontan procedure are at an increased risk of thrombosis which suggests that aspirin should be continued perioperatively, except during high-risk procedures where there is increased risk of hemorrhage. Hemorrhage is a significant but uncommon complication of adenotonsillectomy; however, chances of hemorrhage do not appear to be increased in high-risk patients with comorbid conditions.

Conclusion: Current literature does not offer guidance regarding the ideal perioperative management of aspirin for patients with aspirin dependent cardiac conditions, such as those status post-Fontan repair. There is a need for evidence-based protocol on how to manage aspirin intake in the perioperative period for Fontan patients. Retrospective evaluation of current management and prospective protocols should be studied to aid in the management of this growing population.

INTRODUCTION

• Patients that have undergone the Fontan procedure are at an increased risk of thromboembolism which necessitates anticoagulant administration indefinitely.
• The increased risk is often attributed to quantitative abnormalities in procoagulant and anticoagulant proteins, low flow, arrhythmia and venous stasis.8
• The delicate balance between these factors makes it difficult for surgeons to assess how perioperative aspirin cessation will affect Fontan patients following a procedure.

LITERATURE REVIEW

• Current guidelines do not recommend aspirin use in children following surgery.6 Consequently, literature regarding aspirin and bleeding complications following adenotonsillectomy is outdated and sparse.
• The risk of hemorrhage increases in high risk procedures such as adenotonsillectomy.12 Over 30% of Fontan patients experienced complications after non-cardiac surgery, with hemorrhage being the most common complication.3
• There is significant debate about whether the risk of hemorrhage from aspirin is more significant than its cardioprotective benefits in patients on a long-term aspirin regimen undergoing non-cardiac surgery.
• Criteria such as the kinetics of platelet recovery, stratifying surgical procedures according to risk of hemorrhage, and evaluating bleeding risk versus bleeding severity have been used to guide recommendations but there is little consensus.1,3,10,11,16
• When surveying otolaryngologists about their practices regarding perioperative management of antiplatelet drugs, 45% stated that they had no relevant departmental protocol and 86% welcomed more guidance on the topic.18

REFERENCES

9. Cochrane Database of Systematic Reviews, (7), 1-89.