
ANTICOAGULANT-ANTIPLATELET MEDICATIONS BEYOND NEURAXIAL PROCEDURES: India-Based Anesthesiologist and America-Based Anesthesiologist Siblings' Dialogue Series

Peer review status:

No

Corresponding Author:

Dr. Deepak Gupta,
Anesthesiologist, Wayne State University, 48201 - United States of America

Submitting Author:

Dr. Deepak Gupta,
Anesthesiologist, Wayne State University, 48201 - United States of America

Other Authors:

Dr. Divya Gupta,
Associate Professor, Department of Anaesthesiology and Pain Management, Swami Rama Himalayan University - India

Article ID: WMC005533

Article Type: My opinion

Submitted on: 04-Feb-2019, 12:28:03 AM GMT **Published on:** 05-Feb-2019, 09:19:22 AM GMT

Article URL: http://www.webmedcentral.com/article_view/5533

Subject Categories: ANAESTHESIA

Keywords: America, India, Anticoagulants, Antiplatelets, Neuraxial Procedures, General Anesthesia

How to cite the article: Gupta D, Gupta D. ANTICOAGULANT-ANTIPLATELET MEDICATIONS BEYOND NEURAXIAL PROCEDURES: India-Based Anesthesiologist and America-Based Anesthesiologist Siblings' Dialogue Series. WebmedCentral ANAESTHESIA 2019;10(2):WMC005533

Copyright: This is an open-access article distributed under the terms of the [Creative Commons Attribution License \(CC-BY\)](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Source(s) of Funding:

None

Competing Interests:

None

ANTICOAGULANT-ANTIPLATELET MEDICATIONS BEYOND NEURAXIAL PROCEDURES: India-Based Anesthesiologist and America-Based Anesthesiologist Siblings' Dialogue Series

Author(s): Gupta D, Gupta D

Abstract

Question: Are We, As Anesthesiologists, Worried About Anticoagulant-Antiplatelet Only When Performing Neuraxial Procedures? Answer: May NOT Be.

Dialogue

DeG: Hey Sis, what's the status over there about adherence to anticoagulant-antiplatelet medications in regards to neuraxial procedures?

Â

DiG: Obviously following them, Bro.

Â

DeG: Are people over there aware about the new guidelines that came up regarding what cautions to follow whenever there are concomitant requirements for using both anticoagulant-antiplatelet medications and neuraxial procedures?

Â

DiG: Are you talking about year-2018 guidelines issued by American Society of Regional Anesthesia and Pain Medicine (ASRA)?

Â

DeG: Correct.

Â

DiG: Aren't there two sets of guidelines issued by ASRA in 2018? One for regional anesthesia and other one for interventional spine and pain procedures [1-2]?

Â

DeG: That's correct too.

Â

DiG: What's the major difference between the two?

Â

DeG: One is designed primarily for anesthesiologists managing epidural-spinal anesthesia-analgesia in

perioperative periods and other is designed primarily for interventional pain physicians performing interventional pain procedures in their clinics and/or in the hospitals.

Â

DiG: Are there any major differences between these two sets of guidelines?

Â

DeG: Not really. They aren't actually much different from each other especially when overall these two-set-guidelines are essentially meant to prevent epidural-spinal hematomas secondary to neuraxial procedures in the patients who are concomitantly receiving anticoagulant-antiplatelet medications.Â

Â

DiG: I understand that up there, a lot many patients receive anticoagulant-antiplatelet medications per guidelines [3], and thus, when this big percentage of patient population presents for a lot many procedures warranting the need for standalone-or-concomitant neuraxial procedures for perioperative anesthesia-analgesia and chronic pain control, ASRA had to put forth the guidelines about them. And with plethora of new medications being introduced in the healthcare markets, ASRA has to keep updating the guidelines based on the challenges of unknown outcomes in regards to the newer medications and the ever-changing feedback about the long known medications.

Â

DeG: Looks like you are reading a lot.

Â

DiG: I am. But may be I am talking to you a lot.

Â

DeG: Either way. You are correct that we are in Catch-22 situation in regards to deciding and accommodating standalone-or-concomitant neuraxial procedures for perioperative anesthesia-analgesia and chronic pain control when the number of anticoagulant-antiplatelet medications just keeps on

increasing, the indications for these medications just keep on soaring, and the number of surgical-interventional procedures among the patients are being driven up on unstoppable trains irrespective of whether they are using the anticoagulant-antiplatelet medications or not [4-10].

Â

DiG: What's the harm anyway, Bro? The past-and-future of science has always been about exploring the unexplored-undiscovered and eventually accommodate with the discoveries-and-inventions for the sake of greater good at a given point of time in the history.

Â

DeG: That's true. Let's take a step further. Do you ever wonder if anticoagulant-antiplatelet medications matter to anesthesia providers when they are providing perioperative care to patients who are NOT receiving any neuraxial procedure?

Â

DiG: I think so, considering that the perioperative management of surgical bleeding becomes the responsibility of anesthesia teams at least in terms of perioperative transfusion requirements. Moreover, Bro, don't you think that endotracheal intubations and other airway manipulating procedures like laryngeal mask airways, oropharyngeal airways and intubation bronchoscopies warrant that anesthesia teams should quantify cautions in terms of anesthesia-procedure-related bleeding among the patients receiving anticoagulant-antiplatelet medications?

Â

DeG: I agree. But in the absence of any such specific guidelines from anesthesia providers' societies, the anesthesia teams in collaboration with surgical-interventionists' teams can only quantify cautions on individual level which each individual anesthesia team can decide to follow depending on personal knowledge and comfort levels in regards to managing any complications which may be suspected to arise from patients' usage of anticoagulant-antiplatelet medications.

Â

DiG: Why can't we ask anesthesia societies to consider developing guidelines in regards to patients undergoing general anesthesia or sedation wherein anesthesia related procedures themselves may have risk of bleeding in the patients on anticoagulant-antiplatelet medications?

Â

DeG: May be we can ask. But may be we can just assume that if the surgeries-and-interventional procedures are safe within certain time intervals after anticoagulant-antiplatelet medications, then the anesthesia related procedures may be safe too. At least, the anesthesia related procedures which we are talking about don't create unique scenarios like the neuraxial procedures which can put patients at risk of critical epidural-spinal hematomas within their restrictive neuraxial anatomical spaces warranting emergent surgical decompressive surgeries to prevent temporary neurological sequelae from becoming permanent.

Â

DiG: Just for the sake of talking. If bleeding is going to interfere during intubation bronchoscopies [11-12], may be use videolaryngoscopy, unless airway securement is NOT feasible with videolaryngoscopy, and may be then utilizing a very good suction source for clearing the blood during bronchoscopy, and may be then proactively planning for an alternative anesthesia team with higher proficiency in intubation bronchoscopy to save the day.

Â

DeG: Similarly, arterial cannulations and central venous catheterizations may have to be cautiously performed while ensuring to keep them as atraumatic as possible. And may be avoiding those anatomical sites for venous catheterizations where bleeding can be difficult to control [13-14].

Â

DiG: What about orogastric or nasogastric tube placement? What about transesophageal echocardiography probe placement? What about pulmonary artery catheterization?

Â

DeG: Just following the common sense. Be gentle. Be as atraumatic as possible. Perform the procedure as smoothly as what we would expect from our anesthesia provider in case that patient is us or our kin.

Â

DiG: Essentially, the core concept of "Do No Harm" whenever trying "To Do Good".

Â

DeG: Well said, Sis. As an interim measure for us anesthesiologists until the time point when anesthesia providers' societies may embrace the idea to consider writing their own guidelines in regards to anticoagulant-antiplatelet medications beyond

neuraxial procedures, I have found some guidelines which the American Society for Gastrointestinal Endoscopy had released in 2016 [15] and which joint Asian Pacific Association of Gastroenterology and Asian Pacific Society for Digestive Endoscopy had released in 2018 [16] in regards to patients receiving gastrointestinal endoscopic procedures when they are also on anticoagulant-antiplatelet medications. These guidelines may give an idea what to expect-and-consider in terms of bleeding risk when we are providing general anesthesia or sedation or performing anesthesia related procedures in the patients on anticoagulant-antiplatelet medications, assuming that our procedures are as traumatic as gastrointestinal endoscopic procedures with analogously similar complications.

Â

DiG: Will read them, Bro.

Â

DeG: Take care, Sis.

References

- Horlocker TT, Vandermeulen E, Kopp SL, Gogarten W, Leffert LR, Benzon HT. Regional Anesthesia in the Patient Receiving Antithrombotic or Thrombolytic Therapy: American Society of Regional Anesthesia and Pain Medicine Evidence-Based Guidelines (Fourth Edition). *Reg Anesth Pain Med.* 2018 Apr;43(3):263-309. Accessed on December 18, 2018 from: <http://dx.doi.org/10.1097/AAP.0000000000000763>
- Narouze S, Benzon HT, Provenzano D, Buvanendran A, De Andres J, Deer T, Rauck R, Huntoon MA. *Interventional Spine and Pain Procedures in Patients on Antiplatelet and Anticoagulant Medications (Second Edition): Guidelines From the American Society of Regional Anesthesia and Pain Medicine, the European Society of Regional Anaesthesia and Pain Therapy, the American Academy of Pain Medicine, the International Neuromodulation Society, the North American Neuromodulation Society, and the World Institute of Pain.* *Reg Anesth Pain Med.* 2018 Apr;43(3):225-262. Accessed on December 18, 2018 from: <http://dx.doi.org/10.1097/AAP.0000000000000700>
- Wigle P, Hein B, Bloomfield HE, Tubb M, Doherty M. Updated guidelines on outpatient anticoagulation. *Am Fam Physician.* 2013 Apr 15;87(8):556-66. Accessed on December 18, 2018 from: <https://www.aafp.org/afp/2013/0415/p556.pdf>
- Morgan DJ, Dhruva SS, Coon ER, Wright SM, Korenstein D. 2018 Update on Medical Overuse. *JAMA Intern Med.* 2018 Dec 3. Accessed on December 18, 2018 from: <http://dx.doi.org/10.1001/jamainternmed.2018.574>
- Morgan DJ, Dhruva SS, Coon ER, Wright SM, Korenstein D. 2017 Update on Medical Overuse: A Systematic Review. *JAMA Intern Med.* 2018 Jan 1;178(1):110-115. Accessed on December 18, 2018 from: <http://dx.doi.org/10.1001/jamainternmed.2017.4361>
- Morgan DJ, Dhruva SS, Wright SM, Korenstein D. 2016 Update on Medical Overuse: A Systematic Review. *JAMA Intern Med.* 2016 Nov 1;176(11):1687-1692. Accessed on December 18, 2018 from: <http://dx.doi.org/10.1001/jamainternmed.2016.5381>
- Morgan DJ, Dhruva SS, Wright SM, Korenstein D. Update on Medical Practices That Should Be Questioned in 2015. *JAMA Intern Med.* 2015 Dec;175(12):1960-4. Accessed on December 18, 2018 from: <http://dx.doi.org/10.1001/jamainternmed.2015.5614>
- Morgan DJ, Wright SM, Dhruva S. Update on medical overuse. *JAMA Intern Med.* 2015 Jan;175(1):120-4. Accessed on December 18, 2018 from: <http://dx.doi.org/10.1001/jamainternmed.2014.5444>
- Coon ER, Young PC, Quinonez RA, Morgan DJ, Dhruva SS, Schroeder AR. 2017 Update on Pediatric Medical Overuse: A Review. *JAMA Pediatr.* 2018 May 1;172(5):482-486. Accessed on December 18, 2018 from: <http://dx.doi.org/10.1001/jamapediatrics.2017.5752>
- Coon ER, Young PC, Quinonez RA, Morgan DJ, Dhruva SS, Schroeder AR. Update on Pediatric Overuse. *Pediatrics.* 2017 Feb;139(2). pii: e20162797. Accessed on December 18, 2018 from: <http://dx.doi.org/10.1542/peds.2016-2797>
- Bernasconi M, Koegelenberg CFN, Koutsokera A, Ognja A, Casutt A, Nicod L, Lovis A. Iatrogenic bleeding during flexible bronchoscopy: risk factors, prophylactic measures and management. *ERJ Open Res.* 2017 Jun 21;3(2). pii: 00084-2016. Accessed on December 18, 2018 from: <http://dx.doi.org/10.1183/23120541.00084-2016>
- Chinsky K. Bleeding risk and bronchoscopy: in search of the evidence in evidence-based medicine. *Chest.* 2005 Jun;127(6):1875-7. Accessed on December 18, 2018 from: <http://dx.doi.org/10.1378/chest.127.6.1875>
- Deere M, Burns B. Central Venous Access, Subclavian Vein. [Updated 2018 Nov 13]. In: *StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2018 Jan-.* Accessed on December 18, 2018 from: <https://www.ncbi.nlm.nih.gov/books/NBK482224/>
- Kornbau C, Lee KC, Hughes GD, Firstenberg MS. Central line complications. *Int J Crit Illn Inj Sci.* 2015 Jul-Sep;5(3):170-8. Accessed on December 18, 2018 from: <http://dx.doi.org/10.4103/2229-5151.164940>
- ASGE Standards of Practice Committee, Acosta RD, Abraham NS, Chandrasekhara V, Chathadi KV, Early DS, Eloubeidi MA, Evans JA, Faulx AL, Fisher DA, Fonkalsrud L, Hwang JH, Khashab MA,

- Lightdale JR, Muthusamy VR, Pasha SF, Saltzman JR, Shaukat A, Shergill AK, Wang A, Cash BD, DeWitt JM. The management of antithrombotic agents for patients undergoing GI endoscopy. *Gastrointest Endosc*. 2016 Jan;83(1):3-16. Accessed on December 18, 2018 from: <http://dx.doi.org/10.1016/j.gie.2015.09.035>
16. Chan FKL, Goh KL, Reddy N, Fujimoto K, Ho KY, Hokimoto S, Jeong YH, Kitazono T, Lee HS, Mahachai V, Tsoi KKF, Wu MS, Yan BP, Sugano K. Management of patients on antithrombotic agents undergoing emergency and elective endoscopy: joint Asian Pacific Association of Gastroenterology (APAGE) and Asian Pacific Society for Digestive Endoscopy (APSDE) practice guidelines. *Gut*. 2018 Mar;67(3):405-417. Accessed on December 18, 2018 from: <http://dx.doi.org/10.1136/gutjnl-2017-315131>