

CORRESPONDENCE

The Perioperative Management of Anticoagulation and Platelet Aggregation Inhibitors in Endoscopic Interventions

by PD. Dr. med. Christian M. Lange, Prof. Dr. med. Stephan Fichtlscherer, PD Dr. med. Wolfgang Miesbach, Prof. Dr. med. Stefan Zeuzem, and Prof. Dr. med. Jörg Albert in issue 8/2016

No Benefit for Idarucizumab

The review article by Lange et al. on the management of anticoagulation in the setting of endoscopic interventions provides helpful advice and pointers for routine clinical practice (1). Their assessment clashes with the available evidence in one single issue: idarucizumab has thus far not been shown to offer any benefit in terms of the safe administration of anticoagulants. Pollack et al. write verbatim: “Among 35 patients in group A who could be assessed, hemostasis, as determined by local investigators, was restored at a median of 11.4 hours” (2).

In the setting of a dosing interval of 12 hours for dabigatran, idarucizumab therefore seems to be clinically ineffective in practice, except for its effectiveness in laboratory tests.

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REFERENCES

1. Lange CM, Fichtlscherer S, Miesbach W, Zeuzem S, Albert J: The perioperative management of anticoagulation and platelet aggregation inhibitors in endoscopic interventions. *Dtsch Arztebl Int* 2016; 113: 129–35.
2. Pollack CV, Reilly PA, Eikelboom J, et al.: Idarucizumab for dabigatran reversal. *N Engl J Med* 2015; 373: 511–20.

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Desmopressin as a Treatment Attempt

For endoscopic interventions, recommendations exist on how to administer oral anticoagulants and thrombocyte aggregation inhibitors. Unfortunately the authors did not mention administering desmopressin to prevent hemorrhages or rapidly achieve hemostasis, and neither did they mention local hemostasis by using cyclokapron solution (1). Before administering highly concentrated platelets after hemorrhage during an urgent operation, preceding which it was not possible to stop treatment with platelet aggregation inhibitors, a treatment attempt should be undertaken using desmopressin (0.3 µg/kg body weight as a brief i.v. infusion administered over 30 minutes) (2). Locally, hemostasis can be achieved by applying a gauze pad soaked in cyclokapron solution, for example, if a tissue specimen was

taken (3).

Hemorrhages in patients receiving vitamin K antagonists or direct anticoagulants can be stopped immediately by administering a complex consisting of prothrombin, proconvertin (factor VII), Stuart–Prower factor (factor X), and antihemophilic globulin B (PPSB) or activated PPSB complex. If the treatment with direct anticoagulants can be stopped before the procedure, concentrations should be lower than 30 µg/L in order to prevent intensified bleeds. If the risk of thrombosis is high—especially during an episode of Crohn’s disease or ulcerative colitis—effective anticoagulation treatment will have to be initiated 6 hours after the procedure, for example, overlapping with heparin and vitamin K antagonists or direct anticoagulants.

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REFERENCES

1. Lange CM, Fichtlscherer S, Miesbach W, Zeuzem S, Albert J: The perioperative management of anticoagulation and platelet aggregation inhibitors in endoscopic interventions. *Dtsch Arztebl Int* 2016; 113: 129–35.
2. Schulmann S: Pharmacologic tools to reduce bleeding in surgery. *Hematology Am Soc Hematol Educ Program* 2012; 2012: 517–21.
3. van Galen KP, Engelen ET, Mauser-Bunschoten EP, van Es RJ, Schutgens RE: Antifibrinolytic therapy for preventing oral bleeding in patients with haemophilia or Willebrand disease undergoing minor oral surgery or dental extractions. *Cochrane Database Syst Rev* 2015; 12: CD011385.

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In Reply:

We thank Prof. Kiesewetter for pointing out that desmopressin can be used for preventing and treating hemorrhages in patients who are being treated with platelet aggregation inhibitors; however, their benefit in relation to the new P2Y12 inhibitors has not been confirmed yet (1). In our view, local hemostasis using cyclokapron solution (tranexamic acid) is rarely practicable in endoscopic procedures; a conceivable scenario is local hemostasis by using soaked gauze pads for hemorrhoidal bleeds. A Cochrane analysis showed a reduction in mortality when tranexamic acid is used (i.v. or p.o.) in upper gastrointestinal hemorrhage versus cimetidine/lansoprazole and for tranexamic acid versus placebo; but only one of the included studies had entailed endoscopic therapy (2). For this reason, the study results cannot be compared with clinical reality. It is also correct that vitamin K antagonists can indeed be antagonized with prothrombin complex preparations (as we mentioned in our review article [3]), but these seem of limited effectiveness in terms of antagonizing NOACs (4).

We also thank Dr. Pommer for his important com-

ment on using idarucizumab. He correctly points out that further studies are needed in order to understand the clinical value of idarucizumab. In our view such studies are required particularly because the mentioned study did not include a control group (5). The pharmacologically rapid antagonization of dabigatran by idarucizumab is remarkable and promising. In our opinion, the mean time of 11.4 hours (which roughly equals the half-life of dabigatran), which was observed in the relevant study until hemostasis had been achieved, should not prompt any conclusions about a lacking efficacy of idarucizumab. However, the question of whether a clinically relevant value will be found for any more than individual, selected cases (for example, patients with severe acute renal failure and a particularly massive hemorrhage) will have to remain unanswered for now. DOI: 10.3238/arztebl.2016.0541c

REFERENCES

1. Teng R, Mitchell PD, Butler K: The effect of desmopressin on bleeding time and platelet aggregation in healthy volunteers administered

ticagrelor. *J Clin Pharm Ther* 2014; 39: 186–91.

2. Bennett C, Klingenberg SL, Langholz E, Gluud LL: Tranexamic acid for upper gastrointestinal bleeding. *Cochrane Database Syst Rev* 2014; 11: CD006640.

3. Lange CM, Fichtlscherer S, Miesbach W, Zeuzem S, Albert J: The periprocedural management of anticoagulation and platelet aggregation inhibitors in endoscopic interventions. *Dtsch Arztebl Int* 2016; 113: 129–35.

4. Baron TH, Kamath PS, McBane RD: New anticoagulant and anti-platelet agents: a primer for the gastroenterologist. *Clin Gastroenterol Hepatol* 2014; 12: 187–95.

5. Pollack CV, Jr., Reilly PA, Eikelboom J, et al.: Idarucizumab for dabigatran reversal. *New Engl J Med* 2015; 373: 511–20.

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Conflict of interest statement

The authors of all contributions declare that no conflict of interest exists.