

Transcript Details

This is a transcript of a continuing medical education (CME) activity. Additional media formats for the activity and full activity details (including sponsor and supporter, disclosures, and instructions for claiming credit) are available by visiting:

<https://reachmd.com/programs/cme/intracranial-hemorrhage-and-anticoagulation-reversal-in-the-ed/14423/>

Released: 11/01/2022

Valid until: 11/01/2023

Time needed to complete: 1h 01m

ReachMD

www.reachmd.com

info@reachmd.com

(866) 423-7849

Intracranial Hemorrhage and Anticoagulation Reversal in the ED

Announcer:

Welcome to CME on ReachMD. This episode is part of our MinuteCME curriculum.

Prior to beginning the activity, please be sure to review the faculty and commercial support disclosure statements as well as the learning objectives.

Dr. Gibler:

Our first presentation is on intracranial hemorrhage and anticoagulation reversal in the ED. And Dr. Barbra Backus, who's an emergency physician from Franciscus Gasthuis and Vlietland Hospital in Rotterdam, Netherlands, is an internationally acclaimed emergency physician. You probably know her from the HEART score, which she had a major responsibility for developing, which is now used across the world for the diagnosis of patients with acute coronary syndrome. Dr. Backus, will you talk to us about intracranial hemorrhage?

Dr. Backus:

Well, thank you so much Brian for the kind introduction, and thank you all for being here and listen to our presentations. For the next 10 minutes, I will talk to you about patients with intracranial hemorrhage who are on oral anticoagulants and their treatment in the emergency department.

With increasing age, vascular comorbidity, and the use of oral anticoagulants, we see increasing intracranial hemorrhage. And in fact, factor 10A inhibitor-related intracranial hemorrhage affects up to one in 200 patients using a factor 10A inhibitor yearly. And a the 30-day mortality after an intracranial hemorrhage is up to 48%. When we look at the data from the ANNEXA-4 study, it shows that when patients with intracranial hemorrhage are treated with andexanet alfa, they had excellent or good hemostatic efficacy within 12 hours after infusion and mortality drops to 16%, which is quite impressive. One might be able to argue whether mortality is the best outcome here or whether it is residual symptoms. But at least it shows that hemostatic effect is very good after andexanet alfa.

So, what do we do when we see a patient at the emergency department with oral anticoagulant-related bleeding? Well, first of all, it's important to give proper resuscitation and hemodynamic support following our ABCs. Also important, especially in intracranial hemorrhage to be aware of hematoma expansion. And in order to overcome that it's important to do proper blood pressure control and try to achieve a blood pressure of 140 millimeters mercury. In case that intracranial hemorrhage is, for example, in a patient with trauma, it's also important to order blood products when needed. We should give tranexamic acids if it is within three hours after the event. In trauma patients, tranexamic acid has shown to be effective. In patients with intracranial hemorrhage, the evidence is less convincing, however, it doesn't seem to harm them as well. Then it is important to early think of targeted intervention, which is mostly interventional radiology in the case of intracranial hemorrhage. And then we might ask ourselves whether or not any reverse of anticoagulants is needed.

In order to answer that question, whether or not we need to reverse or replete coagulation factors, we have to ask ourselves several questions. And the first question is. Is this patient really anticoagulated? Did he or she use his medication? Then the second question is, which anticoagulant is this patient using? Is it one of the coumarins or warfarin, or is it one of the DOACs, the direct anticoagulants? When was the last time the medication was taken? Was it just this morning or was the patient already feeling a little bit unwell, and did

he take his last medication yesterday evening? You must have some knowledge on the half-lives of the medication that the patients are using. And as you can see in this table, warfarin has the longest half-life of the oral anticoagulants, where the DOACs have a much shorter half-life of five up to 15 hours. However, it must be said that in compromised and sick patients, a recent study show that the half-life runs up to sometimes even 20 hours. So, we cannot fully rely on the half-life of the oral anticoagulants in patients that are really sick. And the fifth question we have to ask ourselves, what is the renal function? And this question is important because as you can see in the table, the renal clearance is especially important in the oral anticoagulants. And patients with kidney dysfunction tend to have a longer half-life.

Announcer:

You have been listening to CME on ReachMD. This activity is jointly provided by the University of Cincinnati College of Medicine Office of Continuing Medical Education, EMCREG-International, and TotalCME, Inc.

To receive your free CME credit, or to download this activity, go to ReachMD.com/CME. Thank you for listening.