

---

## Prolonged Prothrombin Time After Discontinuing Vitamin K Antagonist

Mark W.M. Schellings,<sup>1\*</sup> Moniek P.M. de Maat,<sup>2</sup> Sacha de Lathouder,<sup>3</sup> and Floor Weerkamp<sup>1</sup>

Department of Clinical Chemistry, Maastad Hospital, Rotterdam, the Netherlands; 2 Department of Hematology, Erasmus Medical Center, Rotterdam, the Netherlands; 3 STAR Medical Diagnostic Center, Rotterdam, the Netherlands.

\* Address correspondence to this author at: MaastadLab, Department of Clinical Chemistry, Maastad Ziekenhuis, Maastadweg 21, 3079 DZ Rotterdam, the Netherlands. E-mail [schellingsm@maastadziekenhuis.nl](mailto:schellingsm@maastadziekenhuis.nl)

---

### CASE DESCRIPTION

A 65-year-old man was admitted to our hospital for a colonoscopy. He had been taking a vitamin K antagonist (acenocoumarol) since 1989, when he suffered from 2 episodes of lower limb deep vein thrombosis. Over time, his prothrombin time (PT)<sup>4</sup> international normalized ratio (INR) values were stable and checked regularly at an anticoagulation clinic. The anticoagulation clinic advised him to stop the intake of vitamin K antagonists 3 days before the colonoscopy. For patients undergoing a colonoscopy, a maximum INR of 1.7 on the day of the procedure is accepted. At our hospital, on the day of the scheduled colonoscopy procedure, our patient had an INR of 2.5. Based on this value, the colonoscopy was canceled and rescheduled. In addition to the INR, an activated partial thromboplastin time (APTT) was performed, which was greatly prolonged (>125 s).

The patient accepted the cancellation of the procedure but questioned his INR result of 2.5. Therefore, a few hours after visiting our hospital, he had the values checked again at his anticoagulation clinic, which resulted in an INR of 1.2. Puzzled, he phoned the clinical laboratory of the hospital and asked to speak with the clinical chemist for an explanation of these inconsistent results.

| QUESTIONS TO CONSIDER   |
|---|
| <ul style="list-style-type: none"><li>• What are possible causes of a PT-INR that differs between laboratories?</li></ul>                         |
| <ul style="list-style-type: none"><li>• Considering the medical history of the patient, what diagnosis does the prolonged APTT suggest?</li></ul> |
| <ul style="list-style-type: none"><li>• What additional testing should be done to confirm the diagnosis in this patient?</li></ul>                |

### Final Publication and Comments

The final published version with discussion and comments from the experts will appear in the September 2017 issue of *Clinical Chemistry*. To view the case and comments online, go to <http://www.clinchem.org/content/vol63/issue9> and follow the link to the Clinical Case Study and Commentaries.

### Educational Centers

If you are associated with an educational center and would like to receive the cases and questions 1 month in advance of publication, please email [clinchemed@aacc.org](mailto:clinchemed@aacc.org).

All previous Clinical Case Studies can be accessed and downloaded online at <https://www.aacc.org/publications/clinical-chemistry/clinical-case-studies>

AACC is pleased to allow free reproduction and distribution of this Clinical Case Study for personal or classroom discussion use. When photocopying, please make sure the DOI and copyright notice appear on each copy.

---

AACC is a leading professional society dedicated to improving healthcare through laboratory medicine. Its nearly 10,000 members are clinical laboratory professionals, physicians, research scientists, and others involved in developing tests and directing laboratory operations. AACC brings this community together with programs that advance knowledge, expertise, and innovation. AACC is best known for the respected scientific journal, *Clinical Chemistry*, the award-winning patient-centered web site *Lab Tests Online*, and the world's largest conference on laboratory medicine and technology. Through these and other programs, AACC advances laboratory medicine and the quality of patient care.