

Elderly Female with a Personal and Family History of a Bleeding Disorder

Diana S. Desai,¹ Elaine Lyon,^{1,3} George M. Rodgers,^{1,2,3} Mohamed A. Jama,³ Steven L. Wallentine,⁴ and Kristi J. Smock^{1,3*}

¹ Department of Pathology and ² Department of Medicine, University of Utah Health Sciences Center, Salt Lake City, UT; ³ ARUP Laboratories Institute for Clinical and Experimental Pathology, Salt Lake City, UT; ⁴ Department of Hematology/Oncology, Central Utah Clinic, Provo, UT.

* ARUP Laboratories, 500 Chipeta Way, Mail-Stop 115-G04, Salt Lake City, UT 84108. Fax 801-585-3831; e-mail kristi.smock@aruplab.com.

CASE DESCRIPTION

A 77-year-old woman with a history of excessive bleeding and questionable diagnosis of von Willebrand disease (vWD) presented for a presurgical evaluation. Her daughter and grandson also had a history of a bleeding disorder. Bleeding events reported by the patient and her family members included easy bruising, postsurgical bleeding and hematoma formation requiring intervention with drainage and blood products, and excessive bleeding during childbirth. The physician requested testing for vWD to confirm the diagnosis and subtype, since subclassification of vWD guides appropriate therapy. Results of the initial testing revealed typical prothrombin time (PT) (13.7 s, reference interval 12.0–15.5 s), typical activated partial thromboplastin time (aPTT) (31.5 s, reference interval 24–35 s), mild thrombocytopenia (116 K/ μ L, reference interval 150–450 K/ μ L), typical von Willebrand factor antigen (vWF:Ag) (108%, reference interval 52%–214%), typical factor VIII activity (98%, reference interval 56%–191%), decreased ristocetin cofactor activity (vWF:RCo) (19%, reference interval 51%–215%), and decreased vWF:RCo/vWF:Ag ratio (0.18, reference interval 0.7–1.0).

Questions to Consider

- Which laboratory tests are recommended in the initial evaluation of a patient with a history of bleeding disorders?
- What is the best interpretation of the initial results?
- What additional testing should be done to further clarify the diagnosis and determine optimal treatment?

Final Publication and Comments

The final published version with discussion and comments from the experts will appear in the July 2015 issue of *Clinical Chemistry*. To view the case and comments online, go to <http://www.clinchem.org/content/vol61/issue7> 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 clinchem@aacc.org.

All previous Clinical Case Studies can be accessed and downloaded online at <https://www.aacc.org/publications/clinical-chemistry/clinical-case-studies/2015-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.