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Precision and accuracy of the new Xprecia stride mobile coagulometer

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Oral anticoagulation therapy (OAT) with coumarins (vitamin K antagonist) is the most used against thromboembolism. Prothrombin time International Normalized Ratio (PT-INR) monitoring is fundamental to determine coumarins dosage and prevent bleeding complications or thrombotic events. In this contest, the method used for providing the INR measurements is crucial. Several studies measured both PT-INR precision and accuracy of the most known mobile coagulometer. However, no data on the new Xprecia Stride Mobile Coagulometer (Siemens) are available in literature. The aim of this work is to analyze precision and accuracy of the new Xprecia Stride mobile coagulometer to provide recommendations for clinical use and quality control. A total of 163 patients (mean age=77.4 years old) under Warfarin OAT for whom the INR was assessed by both the traditional cs 2100i Sysmex and the new Xprecia Stride Mobile Coagulometer were included in this study. The precision of the new mobile coagulometer resulted very well ($CV < 3\%$). The analytical accuracy was also in line with other known devices ($MRD = 6.78\%$). Finally, the clinical accuracy was acceptable (deviation $> 15\%$ from the true value in 20% of cases). Considering the overall results obtained by the new Xprecia Stride in comparison to that one's obtained from the other commercial devices, we can conclude that the new coagulometer is enough reliable for clinical settings. However, a larger trial to confirm these data is needed.

Biography

Francesco Piacenza has completed his PhD from the Polytechnic University of Marche. He continued the research activity on age related diseases by leading the Post-doctoral studies at the National Institute of Health and Aging. In 2011, he also acquired the title of Clinical and Epidemiological Research Coordinator at the same institute. He is actually a Specialist in Clinical Biochemistry at the National Institute of Health and Aging in Ancona, Italy. He has published more than 40 papers in peer-reviewed journals with impact factor and is an Editorial Board Member of various journals.

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