

HEMOSTASIS IN CANCER BIOLOGY

HEMOSTATIC ABNORMALITIES IN A PATIENT WITH WALDENSTRÖM'S MACROGLOBULINEMIA

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A 62-year-old man with suspected lymphoproliferative disease scheduled to receive gastroscopy to confirm gastric localization of the disease underwent first-level coagulation laboratory screening according to prehospital protocols. The blood coagulation profile tests revealed important abnormalities, i.e.: PT INR = 5.03 and aPTT unmeasurable. After mixing test 1:1 (patient plasma : pooled normal plasma, PNP) aPTT was partially corrected, achieving a ratio of 6.04. Testing for lupus anticoagulant with dRVVT gave positive results. Antiphospholipid antibody (aPL) determination was positive for anticardiolipin antibody IgM (6126 U/mL; v.r. <20). In contrast, anti- β 2-glycoprotein-I (a β 2GPI) IgG and IgM were both negative. The coagulation factors (II, V, VII, IX, IX and XI) levels were normal. Serum protein electrophoresis indicated the presence of a monoclonal compo-

nent (MC) in the γ -globulin zone. At serum immunofixation, the MC was characterized as IgM-k (17.8 g/L). It was hypothesized that the MC was interfering with the coagulation tests. Therefore, we planned to isolate the MC IgM-k by polyacrylamide SDS gel electrophoresis and purify the protein by HiTrap IgM Purification HP columns. The resulting MC was added in increasing concentrations to normal plasma samples and PT and aPTT were measured. The results showed a prolongation of both tests. Finally, all samples were re-tested by thromboelastography, which gave normal results. In this way, it was possible to determine the extent to which MC was able to functionally interfere with the system of clotting time determination. This artifact likely occurs in the coagulation laboratory when dealing with patients with lymphoproliferative disorders.