Thromboelastrographic study of thrombosis in the implantable central venous access device

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摘要

Abstract

BACKGROUND: In the present study thromboelastography (TEG) was to study whether or not hypercoagulopathy might contribute to the thrombosis of implantable central venous access device (Port-A-Cath, Pharmacia) in cancer patients. METHODS: All 76 oncological patients who were enrolled in this study had their R time, alpha angle and MA value measured before Port-A-Cath implantation, of whom 11 patients received re-implantation because of thrombotic device. We compared the measurements of these 11 patients (thrombotic group) with that of 65 patients (control group) who received Port-A-Cath implantation for the first time. According to TEG values the hemostatic status in these patients was classified as hypercoagulable, normal or hypocoagulable for comparison. All patients in the control group were followed up for 3 months for occurrence of thrombosis. RESULTS: It was found that no patient in the thrombotic group was associated with hypercoagulopathy. Five patients (7.5%) in the control group was found in hypercoagulable status at the time of catheter insertion but none of them developed clinical thrombosis during three months of observation. There was no significant difference between the two groups for R time, alpha angle but a higher MA value was found in the control group ($p < 0.05$). Furthermore, the hypercoagulability (7.5% for the control vs. none for the thrombotic group), hypocoagulability (1.5% vs. 9.1%) and normocoagulability (91.0% vs. 90.9%) were not statistically different between the two groups (Fisher exact test, $P = 0.229$). CONCLUSIONS: We conclude that hypercoagulopathy in cancer patients has little, if any, contribution in thrombosis of the implantable central venous access device.