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Title EPIDURAL AND SUBARACHNOID CATHETERS AND ANTICOAGULANTS

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Introduction. Occasional case reports have documented the occurrence of peridural hematomas leading to permanent neurologic damage in patients who were anticoagulated either prior to, or following epidural or subarachnoid catheterization. Controversy still exists whether continuous epidural or subarachnoid catheters can be inserted in patients prior to anticoagulation. In this investigation, we examined the incidence of neurologic complications arising from anticoagulation following epidural or subarachnoid catheterization.

Methods. A total of 4015 patients scheduled for peripheral vascular procedures of the lower extremity under regional anesthesia were included in this study. Of these, 3168 were continuous epidurals and 847 were continuous subarachnoid blocks. Patients with history of blood dyscrasias or patients on preoperative anticoagulation therapy were excluded from the study. Complete clinical neurological and laboratory hematological examinations were performed in the preoperative period. Pre-medication was ordered according to the patients' clinical status and anesthesiologists' preference. In the operating room, patients were placed in either lateral position and the skin of the back was aseptically prepared and draped. A 17 gauge needle was used to reach either the peridural or subarachnoid space, and after proper identification of the space, the catheter was threaded accordingly. Anytime during the whole procedure blood was aspirated, the regional anesthetic technic

was abandoned and the patients were given general anesthesia. Following successful regional block, surgery proceeded. Intraoperatively, about 45 to 60 minutes after performing the regional block, the patients were anticoagulated with heparin. The initial dose of heparin ranged from 4000 to 6000 units followed by 2000 to 3000 units every six hours thereafter. Postoperatively the catheters were left in place and were used for either pain relief, sympathetic blockade or for anesthesia during re-exploration if necessary. After 24 hours of insertion the catheters were removed and patients were followed postoperatively with the neurological examination.

Results. In four cases of epidural group, blood was freely aspirated from the needle, and the procedure was abandoned. Thus, continuous regional technic was performed in 4111 patients who received heparin following catheterization. No neurological complication was noticed in any of the patients in this series as evidenced either by subjective complaints or by neurologic examination.

Discussion. It is concluded from this investigation that performing a meticulous and atraumatic continuous regional anesthesia is not a contraindication in patients to be anticoagulated intraoperatively and postoperatively.