Abstract

Background: Intraanesthetic monitoring of high-risk surgery requires the presence of a central catheter usually placed via subclavian puncture following anatomic reference points. This procedure is technically complex, is done blindly, and is not without complications. It has been reported that with the use of ultrasound guidance the puncture site in the vein can be easily identified and the catheter can be safely inserted for monitoring. The purpose of this study is to determine the reproducibility of ultrasound-guided subclavian puncture and report the advantages of the procedure. Methods: We conducted a prospective study in patients undergoing surgery for cancer and who are candidates for intraanesthetic monitoring. The catheter was placed via an ultrasound-guided subclavian puncture with a high-resolution linear transducer (6-13 MHz color Doppler) minutes before surgery and with the patient under anesthesia. The transducer was placed in the subclavian region identifying the subclavian artery and subclavian vein. Puncture was at one side of the transducer, and identification was made of the trocar on the ultrasound screen guiding it towards the subclavian vein. We evaluated the number of attempts, success rate and complications. Results: There were 16 patients. Puncture was successful on the first attempt in 14 (87.5%) punctures. In two punctures it was successful during the second attempt, and all had a central catheter in place. The average time of puncture was 5 min. There were no complications. Conclusions: Ultrasound-guided subclavian puncture is an alternative to central catheter placement. Time involved is minimal and it ensures adequate placement. There were no complications in this series.

Keywords

Anesthesia, central catheter, blood pressure, ultrasonography.