Clinical application of ECG-guided tip positioning in PICC placement | 1

The objective of the study was to perform the control study between the electrocardiogram (ECG)-guided tip positioning and traditional radiological confirmation method in peripherally inserted central catheters (PICC) placement; the accuracy and applicability of ECG-guided tip positioning were investigated” Li et al (2018).

Abstract:

OBJECTIVE: The objective of the study was to perform the control study between the electrocardiogram (ECG)-guided tip positioning and traditional radiological confirmation method in peripherally inserted central catheters (PICC) placement; the accuracy and applicability of ECG-guided tip positioning were investigated. It aimed to expand the scope of PICC applications.

METHODS: From March 2016 to August 2017, 101 cases of patient with tumor admitted to the hospital were included in this study. The control study was performed before and after PICC placement. The tip positioning of PICC placement was performed under the guidance of bedside ECG system. The X-ray confirmation was applied for confirmation. Several parameters were observed, including positioning accuracy, success rate of primary catheterization, incidence of ectopic catheter, average catheterization time, and incidence of complications.
RESULTS: Position accuracy was 100%. The success rate of primary catheterization was 99%. The incidence of ectopic catheter was 1%. Average catheterization time was (49.59 ± 21.45) min. Incidence of postoperative complications within 1 week was 4%.

CONCLUSION: ECG-guided PICC tip positioning was safe and accurate. Success rate of catheterization could be improved. ECG-guided PICC tip positioning can be applied as an alternative approach for patients with P-wave fluctuations.

Reference:
