To compare the differences of complications and costs of PICC and IPC in the treatment of cancer patients with chemotherapy and to provide a basis for better clinical decision making” Pu et al (2019).

Abstract:

BACKGROUND: Peripherally inserted central catheters (PICCs) and implantable port catheters (IPCs) are 2 most common central venous access for cancer patients receiving chemotherapy. However, no specific evidence exists to guide practitioners on safety and less cost.

OBJECTIVE: To compare the differences of complications and costs of PICC and IPC in the treatment of cancer patients with chemotherapy and to provide a basis for better clinical decision making.

METHODS: All the cohort studies were searched in the Cochrane Library, JBI, PubMed, Elsevier, Web of Science, CINAHL, CBM, and CNKI from inception to July 2018. Two reviewers screened and selected trials, evaluated quality, and extracted data. Meta-analysis and description of the outcomes were performed by using the RevMan 5.3 software.

RESULTS: A total of 761 articles were retrieved, with 15 articles meeting eligibility criteria. Outcome analysis showed no difference in 1-puncture success rate. Peripherally inserted central catheter use was associated with higher complication rates than IPC, including
occlusion, infection, malposition, catheter-related thrombosis, extravasation, phlebitis, and accidental removal rate. The life span of IPC was longer than that of PICC, and the costs of IPC were lower.

CONCLUSIONS: Implantable port catheter has advantages over PICC in reducing cancer patients' complications and less cost in terms of long-term cancer chemotherapy.

IMPLICATIONS FOR PRACTICE: In terms of safety, the results provide evidence for practitioners to choose which type of central venous catheters is better for cancer chemotherapy patients. In terms of costs, practitioners need to make decisions about which type of central venous catheters has less cost.

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