

This study aimed to analyze the incidence and risk factors for central venous access port-related infection (CPI) among Chinese patients receiving cytotoxic chemotherapy” Wang et al (2015).

Reference:

Wang, T.Y., Lee, K.D., Chen, P.T., Chen, M.C., Chen, Y.Y., Huang, C.E., Kuan, F.C., Chen, C.C. and Lu, C.H. (2015) Incidence and risk factors for central venous access port-related infection in Chinese cancer patients. Journal of the Formosan Medical Association. August 4th. .

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Abstract:

BACKGROUND/PURPOSE: Cytotoxic chemotherapy via central venous access ports is an important part of the standard treatment for most cancers, but it is accompanied with the risk of infections. This study aimed to analyze the incidence and risk factors for central venous access port-related infection (CPI) among Chinese patients receiving cytotoxic chemotherapy.

METHODS: Between January 1, 2002 and December 31, 2005 a total of 1391 cancer patients with 1449 totally implantable central venous access ports were evaluated. The log-rank test and Cox proportional hazards model were used for the analyses of risk factors.

RESULTS: The overall CPI incidence rate was 0.21 per 1000 catheter-days. Hematological malignancies and head and neck cancer were associated with an increased risk of CPI (hazard ratio 4.00 and 4.11, respectively, both $p < 0.001$) and less infection-free catheter longevity ($p < 0.001$) compared with other cancer types. Chemotherapy in an adjuvant setting was associated with a lower risk of infection than for patients in a nonadjuvant setting ($p < 0.001$). The most common pathogens isolated from CPI were *Pseudomonas aeruginosa* and *Candida*.

CONCLUSION: Infection remains to be a challenging issue for totally implantable central venous ports. Implementation of an insertion bundle for the prevention of central line-associated bloodstream infections is warranted, especially for those patients with



hematological and head and neck cancers, as well as for patients receiving chemotherapy in the metastatic settings.

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