To evaluate risk factors of infection and effectiveness of preprocedural single-dose intravenous prophylactic antibiotic (PABX) during totally implantable venous access port (TIVAP) placement in preventing procedure-related infections” Nezami et al (2019).

Abstract:

BACKGROUND: To evaluate risk factors of infection and effectiveness of preprocedural single-dose intravenous prophylactic antibiotic (PABX) during totally implantable venous access port (TIVAP) placement in preventing procedure-related infections.

METHODS: This was a retrospective single-institution multicenter study evaluating short-term (30-day) infection outcomes after TIVAP placement. Correlation between infection rates and clinical factors, including hematologic versus non-hematologic malignancy, inpatient versus outpatient status, single versus double lumen and PABX, was investigated using univariate and multivariable analysis in the overall study population as well as the propensity-score-matched cohort.

RESULTS: Overall, 5967 patients underwent TIVAP placement from 2005 to 2016, of which 3978 (67%) patients received PABX. On propensity score matching, 1952 patients with PABX were matched to the same number of patients without PABX. TIVAP was removed due to
infection concern in 48 patients in unmatched and 30 patients in matched population. There was no difference in the rate of infection between those who received PABX and those who did not in both unmatched and matched population (p = 0.5387 and 0.9999). Although infection rate was significantly higher in patients who had TIVAP placement in inpatient setting (p < 0.0001), who received a double-lumen TIVAP (p < 0.0001), or who had hematologic malignancy (p = 0.0004) on univariate analysis, inpatient status was the sole factor associated with higher rate of TIVAP infection on multivariable analysis of both overall (odds ratio 2.31, p < 0.0001) and matched populations (odds ratio 4.36, p = 0.0004).

CONCLUSION: Placement of TIVAP in inpatient setting increases the risk of TIVAP infection. PABX before TIVAP placement does not prevent short-term procedure-related infections.

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