

# **RACIAL DIFFERENCES IN CATHETER RELATED BACTEREMIA IN AN INNER CITY HEMODIALYSIS PATIENT POPULATION**

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Hispanics and African-Americans (AA) constitute 14.8% and 37.2% of hemodialysis (HD) patients in US while 63.1% and 33.8% respectively of our unit census. Tunneled catheters (TC) have been widely used as vascular access for HD. Catheters are associated with increased risk of bacteremia. Race predilection for catheter related bacteremia (CRB) has not been reported in minority population.

All Hispanics and AA ESRD patients who received maintenance HD via TC from January 2006 to December 2007 were retrospectively studied for CRB. Data was analyzed using two tailed t-test, incidence rate ratios (IRR) and odd ratios.

40 Hispanic and 26 AA patients with mean age of  $49.9 \pm 14.9$  and  $53.2 \pm 15.9$  years ( $p=0.39$ ) received maintenance HD for 7625 and 4793 catheter days respectively. Hispanics and AA had mean body mass index (BMI) of  $27.5 \pm 6.4$ ,  $27.1 \pm 7.4$  Kg/m<sup>2</sup> ( $p=0.83$ ) and mean albumin (Bromocresol Green method) of  $3.5 \pm 0.7$ ,  $3.4 \pm 0.6$  gm/dL ( $p=0.63$ ) respectively. Among incident ESRD patients 82.8% of Hispanics and 81.8% of AA were initiated on HD via TC. CRB rate for Hispanics and AA was 1.57 and 0.2 per 1000 catheter days respectively (IRR 8, 95% confidence interval [CI] 1.88-71.7,  $p=0.0007$ ). Previous studies had reported CRB rate in heterogeneous population ranging from 1.6 to 5.5 per 1000 catheter days. Mean catheter duration for Hispanics and AA was 158.8 and 171.7 days ( $p=0.14$ ) respectively. Overall odds of CRB in studied patients were as follows: male 1.29 (95% CI 0.31-5.3), malignancy 3.78 (95% CI 0.58-24.59), active intravenous drug abuse (3.43 (95% CI 0.28-42.4), Diabetes Mellitus 0.32 (95% CI 0.06-1.66), Hepatitis C 0.59 (95% CI 0.06-5.23) and HIV 0.42 (95% CI 0.02-8.03).

Hispanics have a significantly higher incidence of CRB as compared to AA patients after appropriate matching for age, BMI, albumin levels and catheter duration. Although not statistically significant, risk of CRB is higher in males, active intravenous drug abusers and patients with malignancy. Further large scale study is needed to determine epidemiology and racial differences for CRB in ESRD patients.