



Congenital Cardiology Solutions

EFFECTS OF RACE, ETHNICITY AND GENDER ON SURGICAL MORTALITY FOR HYPOPLASTIC LEFT HEART SYNDROME

Poster Contributions

Poster Sessions, Expo North

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Background: Mortality rates remain high for patients with hypoplastic left heart syndrome (HLHS). There is limited information regarding the effect of race, ethnicity and gender on outcomes for the three palliative procedures for HLHS.

Methods: We examined the effects of race, gender, age at surgery, type of admission and volume on in-hospital mortality for palliative procedures for HLHS between 1998 and 2007 using data from the UHC, an alliance of 116 academic medical centers. Patients were classified as black, Hispanic, white or other. Effects were compared by chi-square analysis and logistic regression.

Results: 1729 patients underwent stage 1 palliation (S1P) with a mortality of 28%. Mortality was higher for females (32%, $p < 0.05$), blacks (30%, $p < 0.001$), other races (39.5%, $p < 0.001$), institutions with fewer than 20 procedures (35%, $p < 0.0001$) and an earlier era (33%, $p < 0.0001$). No racial differences were seen at the top five volume institutions (overall mortality 18%), but mortality was higher for blacks (32%) and other races (38%) at lower volume institutions (overall mortality 26%, $p < 0.001$). Mortality was higher for patients discharged home prior to S1P (37%) versus those born at or transferred to the surgical institution (14%, $p < 0.001$). Blacks were more likely to be discharged home prior to S1P (12% versus 5% of non-black races, $p < 0.001$). Mortality for stage 2 palliation (S2P) (1224 patients, 5% mortality) was higher for blacks (11%, OR = 2.99, CL = 1.58-5.67) and Hispanics (11%, OR = 3.42, CL = 1.69-6.90) compared to whites. There were no racial differences for stage 3 palliation (S3P) (1032 patients, 4% mortality). Incidence of prematurity at S1P and age at S2P or S3P did not differ among racial groups.

Conclusions: Risk factors for increased mortality at S1P were: female gender, black or other race, lower volume institution, earlier surgical era and discharge prior to diagnosis. Increased mortality in blacks and other races may be explained by higher mortality at non-top five volume institutions and increased percentage of blacks discharged prior to diagnosis. Racial differences at S2P may account for the reported increased mortality in the first year of life for Hispanic patients with HLHS.