Hospitalization in Women with Turner Syndrome

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The goal of this study was to compare hospitalization outcomes in women with Turner Syndrome (TS), the condition of missing the second X chromosome, and non-TS women. It was hypothesized that TS patients would have higher mortality and length of stay while having a lower likelihood of being discharged to home, independent of the reason they were hospitalized. TS cases and comparable controls were acquired from a database of hospitalizations. TS women were matched 1:4 to controls based on primary diagnosis code, which is used to indicate why a patient was hospitalized. The study population included 14,890 women (2978 TS), making it one of the largest studies ever done on TS. Adjusted multivariate conditional logistic regression models were used for analysis. TS patients were 44% more likely to die compared to matched controls (Odds Ratio (OR):1.44, 95% Confidence Interval (CI):1.02-2.02, p=0.04). TS patients were also more likely to have a longer than average length of stay (OR=1.31, 95% CI:1.18-1.46, p=0.03). TS patients were 32% less likely to be discharged to home (OR=0.68, 95% CI:0.60-0.78, p<0.0001). Outcomes were worse for TS patients when solely analyzing patients admitted for a cardiac indication. Cardiac TS patients were 210% more likely to die compared to matched controls (OR=3.10, 95% CI:1.27-7.57, p=0.01). This study will enable clinicians to be aware that hospitalized patients with TS carry a higher risk of adverse outcomes even when presenting with the same diagnosis as non-TS patients (adjusting for age, race, and other factors), particularly when hospitalized for cardiovascular diseases.

Awards Won:

Second Award of $2,000

American Statistical Association: Third Award of $500