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Authors

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Methods: We included 9 patients with typical atrial flutter for whom mapping and ablation of the CTI was done using Carto mapping as the sole guiding modality. Zero fluoroscopy was achieved in all of them. Another group of 9 matched patients whose ablations were done using the traditional method (i.e. fluoroscopy and Carto guidance) were included as a control.

Results: Both groups had similar baseline characteristics. The total fluoroscopy time and radiation dose in the control group were 12.8 ± 4.8 minutes, 230.2 ± 131.9 mGy, respectively. The zero-fluoroscopy group were done while wearing no lead aprons. The average total procedure time was 114.8 ± 16.9 minutes in the zero-fluoroscopy group, significantly less than that of the control group (138.6 ± 24.3 minutes; $P=0.0286$). The total radiofrequency time was similar in both groups (15.2 ± 7.4 minutes in zero-fluoroscopy group vs 16 ± 2.9 minutes in control group; $P=0.9294$). Bidirectional block was achieved in all patients of both groups. No complications were encountered in either group.

Conclusion: To our knowledge, this is the first study of a zero-fluoroscopic approach using the Carto mapping system for ablation of the cavotricuspid isthmus in the United States. The approach is feasible and effective in achieving bidirectional block with less average total procedure time.

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Background: Anthracycline and trastuzumab are common breast cancer treatments. While improving survival, they elevate risk of congestive heart failure. The incidence of cardiotoxicity (CTx) with these therapies varies in the literature from 10% to 59%, higher than those reported in clinical trials (4%–10%) that excluded patients with preexisting cardiovascular comorbidities. Studies have failed to establish consensus on the risk factors for CTx associated with these therapies.

Purpose: We aim to determine the incidence and risk factors of CTx in breast cancer patients treated with anthracycline and/or trastuzumab at Aurora Health Care.

Methods: A retrospective review of patients with breast cancer who received anthracycline and/or trastuzumab from 2002 to 2011 yielded a total of 2,383 patients. Patients with a left ventricular ejection fraction (LVEF) recorded prior to treatment and at least one follow-up LVEF were included in analysis ($n=319$, 13.4% of total cohort). Database queries

and electronic medical records review (assisted by an in-house natural language processing tool) retrieved data on demographics, comorbidities, congestive heart failure symptoms, oncological treatments and LVEF. The study outcome was CTx, defined as a $\geq 10\%$ decrease in LVEF to a level of $< 55\%$. Chi-squared and Fisher's exact tests were used for categorical variables to test differences in patient characteristics by CTx status (yes/no). Multivariate logistic regression analyses examined the association between risk factors and CTx.

Results: Average age of the patients was 54.9 ± 12.1 years; the cohort was comprised of 50.5% with obesity, 44.2% with smoking history and 47.3% with hypertension. A total of 79 patients developed CTx, an incidence of 24.8%. Multivariable analysis identified divorced/widowed marital status (odds ratio [OR]: 2.70, 95% confidence interval [CI]: 1.26–5.77), history of structural/electrophysiological (EP) cardiac disease (OR: 2.66, 95% CI: 1.24–5.70) and combined anthracycline-trastuzumab therapy (OR: 2.92, 95% CI: 1.48–5.77) as significant risk factors for CTx.

Conclusion: The incidence of CTx was greater in a community setting for which cardiac history and comorbidities are more diverse than in clinical trials. Consistent with prior literature, our study identified combined treatment with anthracycline and trastuzumab as a risk factor for CTx. Our study also suggests divorced/widowed marital status and prior structural/EP cardiac disease as additional risk factors for CTx. Further prospective studies are warranted for verification. We advocate for pre- and posttreatment cardiac monitoring of patients receiving these two therapies.

Are There Advantages to Hiring In-House Training Program Graduates?

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Background: Several studies have compared international graduates on measures of performance, quality and satisfaction. No studies have compared internally versus externally hired graduates in relation to these measures.

Purpose: To identify if there is a difference in hiring patterns and care management (CM)/patient satisfaction (PS) scores between internal and external graduate hires.

Methods: We conducted a quality improvement study on graduates hired by Aurora Health Care from Jan. 1, 2006, to Dec. 14, 2015. CM scores were determined based on hire date. PS scores were calculated based on the calendar year, regardless of exact hire date. PS scales for scoring changed in mid-2010. Hired graduates with no CM and PS scores, as well as those with less than one year of employment, were excluded. Means were compared using two-sample t-tests and regression analysis. Categorical variables were analyzed using chi-squared and Fisher's exact test, as appropriate.

Results: Study population ($N=108$) characteristics included: mean age 38.0 years, 62.0% female gender and 56.5%