Case study of survival of 35 adults by computation of heart congenital disease patients

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It is recommended that adults with congenital heart disease (ACHD) are followed at regional centers with cardiologists with expertise clinical training as well as specialized skills in diagnostic imaging. However, given the limited resources in Western Canada, it is important to triage patients with advanced imaging. Although role of cardiac CT has been clarified in academic centers following ACHD patients, there is a paucity of information on its role in their surveillance in non-academic, and non-regional centers.

Objective: The purpose of this study is to evaluate the utility of cardiac computed tomography (CT) in the surveillance and management of adults with congenital heart disease in a non-regional referral center.

Methods: Adults with congenital heart disease (ACHD) at Regina General Hospital who underwent cardiac CT from 2006 to 2011 were retrospectively analyzed. Information on diagnosis, cardiac symptoms, presence of a pacemaker or defibrillator, anatomic and functional abnormalities was collected. Any added information on diagnosis, or subsequent surgical or percutaneous intervention based on cardiac CT results were identified.

Results: Eighty-five ACHD underwent cardiac CT at our institution. Mean age was 52.3, Standard deviation of 17.5, with a range of 18 to 88 years of age and 55% were men. Thirty nine percent were symptomatic. The complexities of mild, moderate, and severe lesions were 50%, 35%, and 15%, respectively. Additional information was obtained in 15% of the cohort as a result of cardiac CT imaging. In total, 30% of the entire cohort underwent an intervention directly due to cardiac CT results.

Conclusion: Cardiac CT plays a role in management of ACHD patients in a non-regional centre and can help triage the appropriate patients who need intervention to a regional centre.