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CT TAVR assessment in the United Kingdom: insights from a national BSCI/BSCCT survey

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Topic(s): Computed Tomography

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Background

Assessment of aortic valve and root anatomy is a pre-requisite for transcatheter aortic valve replacement. Optimized computed tomography-transcatheter aortic valve replacement (CT-TAVR) provides spatially isotropic images of the aortic annulus to guide selection of the model and size of transcatheter valves. However, protocols for acquisition and reporting of CT-TAVR differ between institutions in the absence of standardised guidelines.

Purpose

This study aims to evaluate the national variation in CT-TAVR assessment in the United Kingdom (UK) including image acquisition, reporting and dissemination of findings to the Heart Team.

Methods

UK cardiac CT centres were invited to complete an online survey detailing CT-TAVR acquisition and reporting at their institution. Information gathered included activity volume, CT-TAVR acquisition protocols, use of beta-blockade, contrast volume and radiation dose, structured reporting parameters and availability of images to the Heart Team.

Results

Forty-seven responses from thirty-six cardiac centres were assessed. Twenty-nine centres (63%) had a structural heart programme including TAVR. Most patients (76-100%) have pre-procedural CT-TAVR performed at 90% of TAVR centres. Beta blockade was used in 22% of centres overall. There was significant variation in the volume of activity with only 6 centres (13%) performing high-volume activity (>200 scans per annum). Combined CT-TAVR reporting by both cardiologists and radiologists was more common at high volume centres (100% vs. 50%, p=0.025) and TAVR centres were more likely to have an established TAVR MDT process (100% vs. 56%, p=0.04). Cardiac imaging specialist presence at TAVR MDT was reported to
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Conclusions

In the United Kingdom, CT-TAVR is performed in both TAVR and non-TAVR cardiac centres. However, there is wide variation in the volumes of activity, approach to acquisition and reporting, contrast volume, and use of a TAVR MDT process.