

00577 **Endovascular Repair of Abdominal Aortic Aneurysm in Asians – Anatomical Predictors of Adverse Outcomes**

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Aims: To review the aorto-iliac morphology of Asian patients with abdominal aortic aneurysms (AAA) who underwent endovascular aneurysm repair (EVAR) and investigate whether anatomical differences with Caucasian populations were associated with adverse outcomes.

Methodology: We reviewed the electronic medical records of 101 patients with pre-EVAR Computed Tomography Angiography (CTA) scans who underwent EVAR in Singapore General Hospital between February 2006 and December 2016. We used a post-processing software to measure the aorto-iliac dimensions of these patients. The measurements were compared qualitatively against measurements in other Asian and Caucasian studies. Uni- and multi-variate analyses using binary logistic regression were performed to evaluate anatomical factors associated with Type I endoleaks (T1EL).

Result: Our patients had shorter common iliac arteries (CIA) than Caucasian patients. The maximum outer CIA diameters in our patients were bigger than most of the Caucasian CIA diameters. Uni-variate analysis showed that aortic neck length, proximal aortic neck diameter and infrarenal aortic length were significantly associated with T1EL. In the multi-variate analysis, aortic neck length showed significant association with T1EL (P = 0.014) after adjusting for proximal aortic neck diameter and infrarenal aortic length.

Conclusion: Asian AAA patients have shorter CIA than Caucasian patients. Qualitative comparison of CIA diameter is complicated by differences in landmarks for CIA diameter measurement. T1EL in Asian patients is correlated to aortic neck length but not CIA anatomy. Adjunct procedures during EVAR in Asian patients are probably able to overcome the differences in CIA anatomy with Caucasian patients.