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## EVALUATION OF THE UTILITY OF ENDOVASCULAR SEALING FOR AORTIC ANEURYSMAL DISEASE

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**Background:** Currently the preferred treatment method for abdominal aortic aneurysm (AAA) is endovascular aneurysm repair (EVAR) due to benefits associated with a minimally invasive procedure over open repair. Limitations of EVAR include limited applicability, higher rates of endoleak and reintervention. A novel technique aiming to overcome these limitations is endovascular sealing (EVAS), using the Nellix device.

**Aims:** Retrospective service evaluation was performed to: evaluate outcomes of all patients treated with EVAS at Southampton General Hospital (SGH). Explore any difference in outcome between EVAS patients treated within the Nellix instructions for use (IFU) versus those outside it.

**Methods:** Data including aneurysm morphology and demographics from all patients treated with EVAS at SGH was collected retrospectively from patient records and computed tomography scans. This was utilized for assessment of survival at 30 days and 1 year, and occurrence of aneurysm related complications or reintervention post-EVAS.

**Results:** 1/26 study patients was female. Mean age and baseline eGFR was 76.9±6 and 62.7±21.4 respectively. 11/26 patients were treated off-IFU. No deaths occurred within 30 days post-operatively. Overall, 5 mortalities occurred by 1 year post-op - none were aneurysm related. 3/5 deaths occurred in patients treated off-IFU. Difference in survival between patients treated within vs. off-IFU was not statistically significant ( $p=0.176$ ; log-rank,  $p=0.260$ ; generalized Wilcoxon). Three patients developed aneurysm related complications, however only one reintervention was performed.

**Conclusion:** Mortality post-EVAS was higher than expected - may be reflective of high risk patients chosen for a novel technique due to unsuitability for other treatment modalities. Endoleak and reintervention rates are low in line with other centers. Longitudinal studies evaluating long-term outcomes post-EVAS are needed to demonstrate its role in the treatment of AAAs.

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