

ANALYSIS OF THE EVOLUTION OF PERSISTENT TYPE 2 ENDOLEAKS**SEIKE Y, MATSUDA H, SHIMIZU S ET AL. NATIONWIDE ANALYSIS OF PERSISTENT TYPE II ENDOLEAK AND LATE OUTCOMES OF ENDOVASCULAR ABDOMINAL AORTIC ANEURYSM REPAIR IN JAPAN: A PROPENSITY-MATCHED ANALYSIS**

Circulation. 2022;145:1056-1066.

<https://doi.org/10.1161/CIRCULATIONAHA.121.056581>

Technology to perform endovascular aneurysm repairs (EVAR) procedures is well established. It has lower procedural mortality and mortality rates compared to open surgery. However, the authors claim that these results don't hold up any longer than 2 years due to the need for reinterventions due to endoleaks. There is consensus that type I and type III endoleaks are surgery eligible. However, there is not consensus on the clinical significance of persistent type II endoleaks (pT2EL), which are the most common complication associated with EVAR (incidence rate between 3.8% and 45%). In addition, in most cases, they are considered benign complications. The Japanese Committee for Stent-graft Management was established back in 2006 to prevent the inadequate use of stent-grafts. Since 2006 all EVARs performed in Japan to this date have been registered. Seike et al.—members of this committee—analyzed the results from this registry to assess the importance of pT2EL and the risk of adverse events in these patients. The authors reviewed the past medical histories of 17 099 patients under 75 years treated with EVAR due to abdominal aortic aneurysm from 2006 through 2015. Patients were divided into 2 groups based on the presence or absence of pT2EL. Out of the overall number of patients, 4957 (29.0%) had pT2EL. Also, in this group, age was significantly older, and there were fewer males. Similarly, these patients were found to be more prone to hypertension and chronic kidney disease, but less susceptible to respiratory disorders.

Afterwards, 2 matched groups were created to adjust for the corresponding differences and compare disease progression and the occurrence of adverse events. This analysis confirmed the higher mortality rate of the pT2EL group due to deaths associated with the aneurysm (pT2EL, 1.0% vs 0.2% in patients without type II endoleaks); the rupture was confirmed in 0.8% of the cases with pT2EL compared to 0.1% of the patients from the control group. Also, significant differences were found in the enlargement of the aneurysm sac > 5 mm (27.4% in the pT2EL group vs 2.7%), and in the need for reintervention (14.9% vs 0.7%, respectively).

The enlargement of the aneurysm sac was associated with age, the diameter of the proximal neck, and chronic kidney disease as independent positive predictors. Also, with masculine sex as a negative predictor.

Results would be indicative that persistent type II endoleaks are not benign. As a matter of fact, in certain patients, procedures of visceral branch embolization would be beneficial. However, the capacity of this type of procedures to reduce reinterventions or the rate of rupture should be confirmed in large scale prospective studies or in randomized clinical trials. In conclusion, they believe that in the case of female elderly patients with a proximal neck of a large diameter and chronic kidney disease, all of them non-modifiable factors associated with a higher risk of long-term survival, open surgery would be advised.