**Title: LINC 22: B-CLEAR Registry: Timing of TEVAR in Type B Aortic Dissection**

**Participants: Dr Erin Saricilar**

**Date: 10/06/2022**

**Dr Erin Saricilar**

- Hello everybody, my name is Dr. Erin Saricilar and I'm a vascular surgery registrar from Royal North Shore Hospital in Sydney, Australia.

**Rationale**

So the B-CLEAR registry is a comprehensive both retrospective and prospective registry trying to capture type-B dissections as they come through multiple centres in Sydney, Australia. The rationale for its creation was in an effort to identify at risk patients in the uncomplicated type-B dissection cohort. A significant meta-analysis that we performed recently looked at whether or not there was differences in the timing of a TEVAR when treating patients with type B aortic dissections and the findings were quite impactful. We actually found that early treatment in the acute phase which is days two to 14 from nidus dissection were able to have no change in mortality risk in the 30 day perioperative period as well as a one year follow up period. But there was a significant improvement in aorta-related events in the one year follow up period. And so our study is aiming to answer this question with a direct study looking at exactly whether or not the timing has an impact on outcomes or not.

**Inclusion/exclusion Criteria and Study Design**

So when it comes to the meta-analysis that was performed the population was those with acute type-B dissections with the intervention and control being TEVAR in the acute phase or TEVAR in the subacute or chronic phase with the outcomes being 30 day perioperative in one year follow up aorta-related events and mortality. The B-CLEAR registry itself is a all encompassing database that is trying to capture every single type-B dissection that comes through the doors of the hospitals involved.

**Outcomes**

So the key outcome that we were looking at was in the 30-day and the one year follow up periods and we were looking at mortality and aorta-related events. Our findings, as I stated a little earlier, were that there was no significant difference in mortality in both 30 day and one year period when it came to early intervention in the acute phase which is days two to 14, and any treatment after that which is a subacute or chronic phase. This was in particular if the hyperacute phase was excluded, hyperacute being day zero to day two.

**Conclusions**

So the key conclusions from this is that TEVAR in the acute period, which again, in days two to 14 from nidus dissection is safe to perform. With our current state of graphs, and a significant increase in endovascular surgical skill across the board, is very safe to perform. So we believe that all patients with uncomplicated type B dissections should be considered for TEVAR in an effort to improve aortic remodelling and both clinical and anatomical characteristics should be considered when making this decision. There is also the question of physiological factors which is something that the B-CLEAR registry is also attempting to answer. By looking at some of the non expected outcomes of perfusion and hypertension as a consequence of the anatomy and pathophysiology of the type-B dissection.

**Impact on Practice**

So again, as we found it's important to try and identify high-risk cohort within the uncomplicated type-B dissection group. It's very clear that a complicated dissection needs to be treated urgently but the current evidence and current guidelines when it comes to treating uncomplicated type-B dissections is somewhat lacking in evidence. And the justification for the timing of TEVAR is inadequate. The ASVS guidelines actually only have two recommendations when it comes to timing. The first recommendation stating that, in an effort to prevent aortic complications in uncomplicated acute type-B aortic dissections, early thoracic endografting may be considered selectively. And this is an answer we're trying to directly find using the B-CLEAR registry. And this meta-analysis shows that there is definitely room for early intervention.

**Next Steps**

So the next steps is expanding the B-CLEAR registry in an effort to capture a larger patient cohort and to get more data points. We are looking at employing more comprehensive technologies already having TeraRecon technology to assess aortic anatomical features as well as using artificial intelligence models to capture niche changes in patient features and patient results that may identify patients that are more at risk in the uncomplicated type-B dissection cohort.