**Valve Research Network Meeting**

**Friday, October 6th, 2023**

**10:00AM – 11:30AM**

**EACTS Vienna**

**MINUTES**

**Aortic Valve Research Network**

1. **Introduction**- Jolanda Kluin

Jolanda welcomed everyone in the meeting. Firstly the aortic valve research network is discussed, then we will have a separate meeting for the mitral tricuspid valve research network.

1. **Database update-** Carlijn van der Ven

**Inclusion**
We now have 49 active centers. Active centers are those that have included patients in the database in the past year. Up until October 2023, 10.369 patients are included in the database.

**Main reason for referral**

Median follow-up: 2.99 years (IQR: 0.44 – 6.66). It is noted that the main reason for referral does not reflect reality yet. Adding more patients to the database will lead to better reflection.

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Figure 1 main reason for referral

**Aortic Valve Repair vs. Replacement**Aortic Valve Repair is 80.6% versus 19,4% aortic valve replacement.

**Follow-up**
Attendees stress that engaging centers and making sure they do a correct and timely follow-up is a priority.

**Medical Arm**- Pouya Youssefi
In order to gain insight into the group of patients before intervention we are establishing a medical arm database. The medical arm database includes patients with heart valve disease (aortic / mitral / tricuspid valve) before any intervention. This is also in accordance with the ICHOM database framework. Currently the data dictionary is finalized, and the electronic case report is completed.

1. **Financial Plan-** Jolanda Kluin

No specific updates. Vinoid notes that if we need it, he has connections with Medtronic. Also, the idea of crowdfunding is discussed. Most attendees find it a good idea and the possibilities of crowdfunding will be researched by the data management team.

1. **Scientific update-** Peter Verbrugghe

In 2023 the following research have been published:

* Arabkhani B, Klautz RJM, de Heer F, De Kerchove L, El Khoury G, Lansac E et al. A multicentre, propensity score matched analysis comparing a valve-sparing approach to valve replacement in aortic root aneurysm: Insight from the AVIATOR database. Eur J Cardiothorac Surg 2023; doi:10.1093/ejcts/ezac514.
* Van Hoof L, Lamberigts M, Noé D, et al. Matched comparison between external aortic root support and valve-sparing root replacement. Heart January 17, 2023. doi:10.1136/ heartjnl-2022-321840
* El Mathari S, Boulidam N, de Heer F, de Kerchove L, Schäfers HJ, Lansac E, Twisk JWR, Kluin J; Aortic Valve Research Network Investigators. Surgical outcomes of aortic valve repair for specific aortic valve cusp characteristics; retraction, calcification, and fenestration. J Thorac Cardiovasc Surg. 2023 May 26:S0022-5223(23)00444-0. doi: 10.1016/j.jtcvs.2023.05.020. Epub ahead of print. PMID: 37244390.

The following research is ongoing:

* Pouya Youssefi, Emmanuel Lansac- Aortic valve repair using external aortic ring annuloplasty: a multicentric analysis of outcomes
* Frederiek de Heer, Jolanda Kluin- Using artificial intelligence to predict the best surgical strategy in patients with aortic valve regurgitation of aortic aneurysm. Insights from the Heart Valve Society Aortic Valve Database
* Matteo Pettinari, Peter Verbrugghe, Laurent de Kerchove- Impact of preoperative aortic regurgitation and leaflet repair on immediate and long term outcomes of valve sparing root replacement in patient with TAV.
* Erwan Salaun, Philippe Pibarot Ismail El-Hamamsy- One-year clinical and hemodynamic outcomes in patients treated for aortic insufficiency and ascending aorta aneurysm. The one-year flight of AVIATOR.
* Mariya Saddiqa Marianna Buonocore Peter Verbrugghe-Aortic valve repair and replacement in patients affected by infective endocarditis: short and mid-term results from the AVIATOR Registry.
* Anahita Noruzi, Hanneke Takkenberg- Aortic Valve repair in adults: determinants of surgical techniques and clinical outcome from the AVIATOR registry.
* Shanti Khargi, Hanneke Takkenberg Pepijn Grashuis- Type of cusp fusion and commissural orientation as a predicting factor of aortic valve repair failure in patients with bicuspid aortic valves
* Vincent Hanet, Bernhard Gerber- Evaluation of gender influence on left ventricular dimensions and outcome in aortic regurgitation.
* Carlotta Brega- Aortic Valve Sparing Root Replacement And Myocardial Dysfunction
Danial Pichoy- Propensity-Matched Comparison of Aortic Valvuloplasty and Prosthetic Aortic Valve Replacement in Adults (CAVIAAR extension)

**Mitral Tricuspid Valve Research Network**

1. **Introduction**- Evaldas Girdaukas

The HVS has approved support of this project under the Valve Research Networks, and it will use mostly the same set-up as the aortic valve database. The database manager (Donna de Geest) is hired to establish all the necessary requirements for data collection for the Mitral-Tricuspid Valve Database.

1. **Database update**- Donna de Geest

The aortic database has been instrumental in the mitral tricuspid database. The two biggest development choices that have been made are highlighted.

**Case Report Form**

The same structure of forms for procedural information, ECHO parameters, additional clamp session, and reintervention forms as the aortic database. However, these forms have been adjusted to cater specifically to mitral and tricuspid valve cases.

A MRI session Form is added. This form should be filled in when conducted, just as the additional clamp session form. Additionally, centers now have the option to include patient-reported outcome measures (the International EQ-5D-3L and ‘Impact on Mental Health and Daily Activities’, based on ICHOM guidelines).

**Project-based center recruitment**

Just as in the aortic valve database, centers can apply patients consecutively. For multi-center research, a center can do a research proposal. For the Mitral-Tricuspid valve database, centers are allowed to apply for either mitral or tricuspid valve patients.

With project-based inclusion, a center proposes a project beforehand. This project focuses on a specific group of patients who have undergone interventions for mitral and/or tricuspid valve disease within a defined time frame. For example, we could compare the number of reinterventions in surgical and transcatheter valve replacement for patients with mitral stenosis over the past 10 years.

Once the project is approved by the scientific committee, other centers can participate in the database by delivering patients with mitral stenosis only. The data from centers participating consecutively is also included using a non-opposition procedure. The center that initiates a project gains access to the data and can convert it into multi-center research.



Figure 1 Project-based inclusion (left) and consecutive inclusion (right)

It is stressed that this could help lower the administrative burden of centers; engage centers by proposing projects and enhance scientific input.

**Progress**
The last few people are included in the Scientific Committee, and the team is completed. Additionally, the protocols, Case Report Form, data dictionary, and other agreements and forms are ready.

**Planning**
Moving forward, the plan is to create an electronic Case Report Form that will allow centers to upload their data and enable us to start collecting data for the database. We are currently in contact with Telemedicine, which is also the host of the aortic database, to determine when we can begin this process. Once we start collecting data, we can recruit centers and maintain the database in general.

1. **Financial Plan**- Evaldas Girdaukas

Evaldas notes that we will get a grand from Edwards. Vinoid notes that if we need it, he has connections with Medtronic. Also, the idea of crowdfunding is discussed. Most participants find it a good idea and the possibilities of crowdfunding will be researched by the data management team.