Mechanical circulatory support therapy monitoring in EUROMACS enters into its second decade with new challenges ahead

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With the publication of the third EUROMACS Report, a milestone with respect to data analysis in the field of mechanical circulatory support has been reached, and new challenges for monitoring LVAD follow-up data have emerged.

Registries such as EUROMACS are confronted with a new reality now that Medtronic has ceased the manufacturing and distribution of its HeartWare HVAD devices [1].

At its inception, the EUROMACS Registry of the EACTS was not set up to compare the outcome of the different devices that are (were) on the market. That principle has not changed leaving one manufacturer of mainstream devices as a quasi-monopolist in the market.

As multiple studies show the Registry is a source with an abundance of data allowing researchers to get in-depth views of the factors that determine the course of the mechanical circulatory support therapy [2–5].

Despite the improvement of devices, adverse events will unfortunately remain occurring, not least as a result of the aetiology and the associated comorbidities of the patients concerned.

At the same time, trends are emerging in (improved) drug therapy, referral patterns of cardiologists and the increasing use of ECLS prior to implantation of a VAD. Additionally, upcoming innovations, after their market introduction, need to be monitored over time in order to determine whether they actually have the preconceived effects.

The professional community will wish to understand the consequences of these changing perceptions. Registry data will continue to contribute to that understanding.

Now that there is only one large mainstream device on the market, the possibility to benchmark outcomes on several levels, between the individual centre and the entire cohort, in some countries between centres on a national level, and finally between continents may open new insights for improvement. Not in the last place comparison between mechanical circulatory support outcomes and heart transplant results will get more attention than before [6].

The withdrawal of the HVAD urges focus on two categories of patients: children and patients with small postures for whom the HVAD was the intracorporeal durable circulatory support device of choice.

To be able to respond to the changed landscape, the challenge for EUROMACS is to adapt its data set to enable meaningful analyses while at the same time keeping its users satisfied. Besides the renewed adverse events definitions options to open the database to follow-up innovations, and last but not least attention for EQ5D data to enable monitoring patient quality of life as compared to heart transplantation.

At 10 years, the motivation to contribute data to EUROMACS remains relentless, and a number of additional hospitals will join in the near future. The challenges for EUROMACS towards 2025 are to capture sufficient granularity of data and events to offer satisfactory possibilities for research and benchmarking to the participating professionals.

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