

Title: HFA 23: MONITOR-HF: Improving QoL& Reducing HF Hospitalisations with PAP Monitoring

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Date: 23/05/2023

Dr Jasper Brugts

"My name is Jasper Brugts. I'm a cardiologist and associate professor at the Erasmus Medical Center in Rotterdam, Netherlands.

What is the importance of MONITOR-HF?

The MONITOR-HF is a randomized clinical trial performed in the Netherlands against a very high level of GDMT and background heart failure therapy. And it is the first randomized clinical trial of this new technology CardioMEMS in Europe.

Can you tell us about the CardioMEMS System?

CardioMEMS is a tiny centre of about a paperclip size unit that can measure the pulmonary artery pressures as a surrogate marker of filling pressures.

What is the study design, patient population and outcomes measures?

The MONITOR-HF is a randomized clinical trial enrolling 348 patients with chronic heart failure in NYHA class three and one previous heart failure hospitalization. And those patients were randomized one on one, without a control, without a sham procedure. So, the controls did not receive the implant and had identical follow-up. The primary outcome was quality of life and secondary outcome were heart failure hospitalizations.

What are the findings presented at HFA 23?

During follow up we found that the quality of life was significantly improved and substantial with seven points on the Kansas City cardiopathy questionnaire, which is

substantial and the heart failure hospitalizations, total heart failure hospitalizations, were reduced by 44% during almost two years follow-up.

How did MONITOR-HF compare to trials such as CHAMPION and GUIDE-HF?

Safety was good. We had 2.3% complications that were mainly arrhythmia and (indistinct) without severe consequences for the patients. It was just a little bit higher than the US trials and the reliability of the sensor; the sensor failures were 1.2. This is comparable to the CHAMPION and the GUIDE-HF trials.

What are the implications for the use of diuretics in GDMT Therapy?

One of the beauties of the studies is that we have a very detailed medication lock file. We know exactly what the doctors did, and we saw that the primary mode of action was changes in diuretics, especially increases but also decreases. It works both ways, so you can monitor hypervolemia and increased diuretics and monitor hypovolemia and lower diuretics and probably that will also provide some room for better optimization of GDMT as well.

What are the next steps?

Next step - this was a reimbursement trial for the Netherlands and the uptake of this technology is low at this moment with a guideline level of recommendations to be, hopefully more patients can get this technology and the uptake in Europe will be higher than it is currently. But also, there will be many fruitful ideas for future research for we have a biobank serial echo, we will do cost effectiveness, try to develop models for worsening heart failure, so much more to do. It's very exciting times and actually very strong data to do further post hoc analysis."