

Title: 5 Trials to Change your Practice With Dr Afzal Sohaib

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Dr Afzal Sohaib

" So I'm Dr. Afzal Sohaib. I'm a consultant cardiologist and electrophysiologist from Barts' Heart Center in London, and I'm going to talk about the most interesting studies I've seen at EHRA 2023.

POTTER-AF

The Potter AF Registry was one of the largest registries of AF Ablation which have looked at the incidence of atrio esophageal fistula after AF Ablation. This was really interesting because you'd hope that after doing AF Ablation for, 20 or so years as a community, and with improvements in technology, we'd see a reduction in what is probably the most worrying complication we worry about. And interestingly, it shows that despite all the advances, the incidence of atrioesophageal fistula remains at about zero point 25%, which is about the same as what it has been in most of the trials up til date. So, we still have some work to do to reduce this dangerous complication. What this registry did show is that if you use cryoablation rather than radio frequency, the incidence of that complication is dramatically lower, almost negligible. So, I mean, that's food for thought, especially with other new technologies such as PFA coming in. Where do we go?

Early Vs Delayed Ablation of AFib

The other trial I'm going to talk about is from Melbourne. John Kalman presented a study of very early AF Ablation versus deferring to twelve months after a patient's been optimized and managed with antiarrhythmic drug therapy. And their outcome was looking at progression to looking at incidence of AF a year after the procedure. So 24 months out from the initial diagnosis up until now, there's been lots of data from other trials and observational studies suggesting that earlier is better. Certainly with this approach they found that there was no statistically significant difference between the

two arms. This was an interesting study because it goes counter to what had been a growing trend to get people in for AF Ablation earlier and earlier. I guess one caveat is they went very, very early with these patients. They got an AF Ablation in the treatment arm within four weeks, which I can imagine most healthcare systems will be very challenging. So in some respects, it provides some reassurance. If you do have some delays built into your system, especially after COVID, and lots of health systems having big backlogs that - waiting up until twelve months doesn't have a really adverse effect on your patients. So that's good news in some respects.

POWERFAST III

There was some interesting data from the POWERFAST III study and stroke substudy from this trial. So POWERFAST III looked at high-power short duration ablation versus a more conventional dose of radio frequency. They used 70 watts in their high-power arm. In terms of freedom from AF, the conventional versus the high-power arm had very similar outcomes. But in terms of safety, there were some concerns in the high-power arm. There were an increased number of subclinical strokes in the high-power arm and imaging changes suggested a stroke as well in the high-power arm. So that is of some concern. The other interesting feature was that there were some signs of oesophageal lesions in both arms. One of the justifications for using high-power short duration is you cause slightly more superficial ablation and reduce the risk of extra cardiac injury to the oesophagus. But certainly there seemed to be some signs that that was still happening with higher power short duration. So a lot of food for thought with that trial.

ADAPT-RESPONSE

So the Adapt-RESPONSE trial looked at Medtronic's adaptive CRT algorithm. So they're biventricular pacemakers. So the idea with this algorithm, which has been around for a couple of years now, is that it will only LV pace a patient with CRT if they meet a certain number of parameters with their device. And they looked to see whether outcomes which include death and heart failure hospitalization was reduced by using this algorithm. It was a huge trial. It ran over eight years, over 3600 patients, and they found no difference between the two arms. This is very interesting. I think there are a

few take-home points for almost outside of the algorithm which were of interest. They presented that they had the lowest mortality and morbidity of any major CRT trial. So it shows that there have been improvements in heart failure treatment. And paradoxically, it makes making these trials slightly harder to run. I think they justified the fact that there probably is still some benefit in using this algorithm, because if you are able to LV only pace a patient, then actually you reduce battery drain. So potentially that reduces the number of box changes a patient may need for their CRT. But certainly an interesting trial. I think some people were hoping that this would probably have a bigger impact. Interestingly, the Kaplan-Meier curves were moving in favour of the adaptive CRT algorithm, but unfortunately, there was some delayed reporting of adverse events which impacted how the trial had to be terminated slightly early. So we may have had a different outcome had that not been the case. But either way, it certainly shows that the algorithm certainly doesn't do any harm and there is certainly a trend towards some benefit, and there are some other benefits potentially which can be gained by using it.

Marshall-Plan

The final trial I want to talk about is the Marshall-Plan from Bordeaux. The team from Bordeaux looked at using vein of Marshall ethanol Ablation for patients with persistent AF. See if that improved their chances of freedom from AF after an Ablation. The control arm had a standard pulmonary vein isolation with radiofrequency ablation. The treatment arm had a vein of Marshall Ablation, but they also had what is effectively posterior wall isolation. They labelled it dome transection by doing a roof line, and if the roof line didn't block a floor line and also a CTI line, and they found a reduction in AF burden in the Marshall Plan arm. This trial still hasn't completed. These were preliminary results, and they still have a few more months of follow-up, but certainly looks very encouraging. And it seems to support the findings we have seen previously from the VENUS trial. So very encouraging and actually shows that we may have another lesion set to use an AF, which now has some evidence from a randomized control trial. So very encouraging.