Cardiologist finds rhythm with new tech

St John of God Hospital Murdoch is now treating patients suffering from atrial fibrillation with the latest hi-tech development in cardiac rhythm management. It is the first private hospital in WA to introduce the Abbott Volt pulse field ablation (PFA) technology – quicker than previous ablation methods, delivering a safe procedure with a lower recurrence rate.

Cardiologist Dr Nik Stoyanov, an AMA (WA) member, performed the hospital's first procedure using Volt's unique "balloon in a basket" system with eight splines that deliver targeted electrical pulses to the affected heart tissue.

"Each spline has several electrodes on it and we can deliver what we call bipolar PFA from those electrodes, and we can turn off some splines if they're not in contact," Dr Stoyanov explains.

"One of the issues with PFA is that you want to be in good contact with your catheter to deliver energy. If you're not in good contact and you're delivering energy to the blood pool, there is a risk of haemolysis which can sometimes be dangerous.

"The main advantage of the balloon in the basket, which we generally keep fully inflated, is it allows you to have good contact. It has contact sensing, so you know which splines are in good contact and which are not.



Dr Nik Stoyanov, Cardiologist

"While we haven't compared all the PFA systems head-to-head, one of the main theoretical benefits here is that the balloon system allows us to get reasonably good contact in as many of the electrodes inside the vein as possible, but we're also able to turn off some electrodes if they're not in good contact, reducing the risk of haemolysis."

Dr Stoyanov says the Volt system also gives clinicians greater flexibility when tailoring treatment for individual patients.

"One of the issues in the past when we did ablations is sometimes it was hard to get tools to suit the patient. Some patients were very technically challenging, so they took a lot longer," he explains. "Sometimes it's a bit of horses for courses, trying to find the right system for that patient.

"I think Volt seems a versatile treatment; you can use it to treat de novo patient ablations, and to treat repeat ablations where maybe you have a reconnection in a couple of the veins." ■

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