

# Heart triumph for Charlies

**A complex heart procedure known as hybrid Endocardial-Epicardial ablation, for which local patients may previously have had to travel interstate, is now available in Western Australia.**

Cardiologist and cardiac electrophysiologist Dr Arie Keren performed the State's first endocardial/epicardial ablation for Arrhythmogenic Right Ventricular Dysplasia (ARVD) at Sir Charles Gairdner Hospital in December.

The eight-hour procedure involved 15 staff and was performed on a Perth mother of three with the rare heart condition.

The operation was successful and has been undertaken several times since on patients with other life-threatening rhythm disorders of the heart.

The introduction of the procedure here means WA heart patients no longer have to fly to Brisbane, Adelaide or Sydney for the life-saving surgery.

In patients with ARVD, heart muscle in their right ventricle is replaced with fatty tissue, causing scarring and their heart to short-circuit and beat rapidly.

Although genetically inherited, ARVD does not usually become a problem until a person is in their teens or twenties so can go undetected and undiagnosed for many years. Typically induced by exercise, it causes the heart to beat very rapidly and can lead to loss of consciousness or even death.

Dr Keren said ARVD was very difficult to treat. Although commonly managed with medication, this invariably became ineffective over time.

When medication failed, ablation — a procedure that involved burning diseased areas of the heart via catheters inserted through veins or arteries — became the next form of attack.

Until recently, ablation performed on ARVD patients in Western Australia was almost always performed on the inside of the heart and usually with poor results because ARVD predominantly affected the outer layer of heart muscle.



**Cardiologist and cardiac electrophysiologist Dr Arie Keren with the team from Sir Charles Gairdner Hospital.**

Dr Keren said a procedure that combined both internal and external ablation of the heart was now recognised as the most effective means of treating ARVD.

For Marnie Zeppel, who underwent Western Australia's first endocardial/epicardial ablation for ARVD, the results have been life-changing.

Dr Keren said Ms Zeppel's prognosis prior to surgery was "pretty terrible".

"She had a heart rate of 220 beats per minute (a healthy heart will have 70 beats per minute) and was virtually undischageable from hospital," he said.

"Since the surgery, she has had no further significant arrhythmia, loss of consciousness or defibrillator shocks."

Lack of access to Ms Zeppel's epicardium (the outside of her heart) — due to risks associated with another medical condition — added to the complexity of Ms Zeppel's surgery.

"The surgery we performed was a hybrid procedure taken in collaboration with other medical specialists including a cardiac surgeon who opened a window to her heart through her breast bone and allowed access to outside of the heart," Dr Keren explained.

Dr Keren said Perth now had the ability to run sophisticated genetic testing capable of identifying the abnormality that caused Ms Zeppel's condition.

He also said Ms Zeppel's three daughters had a 50 per cent chance of having inherited ARVD so they would need to be monitored closely.

Ms Zeppel said she had no doubt Dr Keren saved her life and was grateful to him and her cardiologist, Dr Paul Stobie, for the care they had given her.

After her ARVD diagnosis in 2010, Ms Zeppel was fitted with an internal defibrillator which would fire off small electrical impulses to try to reset her heart rate when it began to race. If after three attempts it hadn't worked, it would fire off a massive shock to try to restore her heart's normal rhythm.

"Normally I would pass out before this happened, but when I was still conscious the pain was excruciating," she said.

Ms Zeppel revealed that prior to her surgery she had received 13 such shocks.