Mexican doctors have safely reused donated pacemakers after sterilisation

A study presented at the Annual Congress of the Mexican Society of Cardiology, the 30th Mexican Congress of Cardiology in Guadalajara, Mexico 2 November 2017, showed that Mexican doctors have safely reused donated pacemakers after sterilisation. The findings create the possibility for patients to receive a pacemaker who otherwise could not afford one.

‘There is no report of the number of pacemaker implants per year in Mexico, but we implant close to 150 new pacemakers annually in our hospital’, said first author Dr Carlos Gutiérrez, a cardiologist at the General Hospital of Mexico ‘Dr Eduardo Liceaga’ in Mexico City.

‘According to government reports, more than half of the population in Mexico does not have access to social security or private insurance that covers a pacemaker implant and 44% live in poverty,’ he continued.1 ‘This suggests that many Mexicans cannot afford a pacemaker. Previous studies have shown the safety of reusing pacemakers after sterilisation’.2–5

The study included 33 patients with a pacing indication who could not afford a new pacemaker or a battery change. Patients received a reused device at the General Hospital of Mexico between 2011 and 2017. Devices had been donated by relatives of deceased patients and had a minimum 6 years of battery life remaining. After confirming that the pacemakers were functioning correctly, they were washed with enzymatic soap and sterilised in an autoclave for 38 min. Pacemaker function was rechecked after sterilisation.

Patients age range was 20–106 years and 52% were female. The indications for a pacemaker were sinus node dysfunction in 10 (30%) patients and advanced atrioventricular block in 23 (70%) patients. Of the 33 patients, 25 received a reused pacemaker. Eight patients already had a pacemaker and received a reused battery. During the implant procedure there was one haematoma which resolved without further complications. There were no complications during the 6-month follow-up period.

Dr Gutiérrez said: ‘This was a small study, but it shows that with a thorough and standardised sterilisation process, explanted pacemakers with a battery life of more than 6 years can be safely reused. This provides an effective option for patients who cannot afford a new device or a replacement battery. This practice can be implemented in other centres that have the equipment to sterilise and reprogramme pacemakers’, continued Dr Gutiérrez. ‘We also need to promote the donation of pacemakers that have had limited use from deceased patients’.

Prof. Jose Zamorano, course director of the ESC programme in Mexico, concluded with: ‘Pacemakers are implanted in many patients across the globe every year. This study highlights a practical way to give access to this life-saving treatment to even more patients who need it’.

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Conflict of interest: none declared.

References

References are available as supplementary material at European Heart Journal online.