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Letter to Editor

Cybersecurity in Pacemakers and Cardioverter-Defibrillators

P Joseph W Verco AM*

North Adelaide Medical Centre, SA, Australia

***Corresponding Author:** Joe Verco, North Adelaide Medical Centre, SA, Australia.

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As a Paediatric Dentist, I have realised that a number of my patients have required treatment under general anaesthesia in hospital, usually where intensive care facilities are available if ever required.

On odd occasions, we have been able to discover children with electrical malfunctioning heart beats (at their first general anaesthetic). Anecdotally, Adelaide's first Long Q-T was in 1998 when referred to the Royal Children's Hospital in Melbourne, and diagnosed by a visiting American Professional Cardiologist, (Anecdotally, 20 years later,she is the mother of one of my patients).

The disorder can be elicited by a number of factors including drugs, stress, light, sound etc. 'Dead in Bed' syndrome and SIDS have also been implicated. There may or may not be genetic links,with more than 300 genetic variants.

Cardiac pacing is controlled by a pacemaker (Australian discovery 1928) and fibrillations prevented with a cardioverter-defibrillator. Nowadays either entity is implantable with appropriate results.

It has now come to my attention that such devices have the potential to be 'hacked'. The US Food and Drug Administrate have alerted that some models of St Jude (Abbott) pacemakers are vulnerable.

This has also lead to the fact that some bedside monitors and pumps may also be vulnerable to interceptions and manipulation, by cyber attack.

Thus far we are assured by SA Heart that there are no reported cases of "hacking" and no recalls have been implemented.

St Jude (Abbott) have issued a software patch to close the vulnerability. Cardiologists are working closely with patients to identify those patients whose device needs programming change as a precautionary measure.

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