

Miniaturized subcutaneous Holter: finally a paediatric tool

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Introduction

Paediatric health professionals are constantly inventing trying to adapt adult technology to our small patients. Miniaturized subcutaneous holter monitor with remote monitoring is a useful tool extensively used in adult population and, due to its small size, potentially useful in paediatrics.

The objective of our work is to analyse utility, implanting techniques and tracings quality of the subcutaneous holter monitor in paediatric population.

Methods

Retrospective analysis of 70 paediatric patients implanted with a miniaturized subcutaneous holter monitor in our institution.

Results

The indication for implant was syncope, palpitations, monitoring and titration of treatment in patients with high risk of malignant arrhythmias.

Implant technique was performed under mild anesthesia, modifying the technique recommended by the company, being at a mid-axillary subpectoral position and closure with surgical glue.

Event detection rate was high (23% of our patients at first 6 months), quality of the electrograms was good (easy identification of P waves, supraventricular and ventricular extrasystoles, supraventricular tachycardias and asystole).

Our experience with remote monitoring has been acceptable in almost all patients. In 72% of them, different types of alerts have been received, finally being described as respiratory arrhythmia.

Concerning complications, two explants have been necessary (local infection) and one abrupt explant has been observed after a high intensity thoracic impact.

Conclusions

Miniaturized subcutaneous holter monitor is an excellent tool for paediatric population, taking into account the limitation of the false alerts in a so common paediatric arrhythmia such respiratory arrhythmia.