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Alexandre Docampo Simón<sup>a,\*</sup>, María José Sánchez-Pujol<sup>a</sup>, Luca Schneller-Pavelescu<sup>a</sup>, Laura Berbegal<sup>b</sup>, Isabel Betlloch Mas<sup>c</sup>

<sup>a</sup> *Servicio de Dermatología, Hospital General Universitario de Alicante, Alicante, Spain*

<sup>b</sup> *Servicio de Dermatología, Hospital de Denia, Denia, Alicante, Spain*

<sup>c</sup> *Servicio de Dermatología, Hospital General Universitario de Alicante, Instituto de investigación ISABIAL, Alicante, Spain*

\* Corresponding author.

E-mail address: [docamposimon@gmail.com](mailto:docamposimon@gmail.com) (A. Docampo Simón).

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## Controlled asystole donation in the paediatric patient<sup>☆</sup>



### Donación en asistolia controlada en el paciente pediátrico

Dear Editor:

Despite the high number of organ transplantations performed in countries like Spain, the availability of organs for paediatric transplantation continues to be limited, which leads to higher morbidity and mortality in this population while waiting.

Donation protocols traditionally involve donation after the diagnosis of brain death in the donor (heart-beating donation), but in recent years protocols have also been developed for non-heart-beating donation, or donation after circulatory death (DCD). Donation after circulatory death is categorised based on the revised Maastricht classification (Paris 2013) into uncontrolled DCD, category I (dead on arrival, or sudden cardiac arrest without performance of cardiopulmonary resuscitation) and category II (sudden cardiac arrest with unsuccessful resuscitation) and controlled DCD, category III (awaiting circulatory death after withdrawal of life-sustaining therapies) and category IV (cardiac arrest in a brain-dead donor).<sup>1,2</sup>

Category III includes patients whose condition has led to the decision of withdrawal or withholding of life-sustaining care. Following this decision, it is considered good clinical practice to consider the patient as a potential organ and tissue donor. The decision to withhold life-sustaining treatment should be made before, separately and completely independently from potential decisions regarding donation after death and the donation process. The transplant coordination team has to assess the appropriateness of the candidate and ensure that the time expected to elapse from withdrawal of life-sustaining treatment to death will be compatible with organ donation and not exceed the warm ischaemia time threshold established by the transplantation

care team. The paediatric intensive care team is responsible for the patient and, completely removed from the donation process, for providing end-of-life care to ensure the well-being and comfort of the patient and for withdrawing life-sustaining therapies. This team is also responsible for death certification, which according to current law, requires verifying the absence of spontaneous circulation and breathing for a period of at least 5 minutes.<sup>2</sup>

The outcomes of organ transplantation in this donation category, such as kidney and liver transplantation, have not been worse compared to the outcomes of transplants from heart-beating brain-dead donors.<sup>1,3</sup>

Category III controlled DCD has been performed successfully in adult intensive care units and currently amounts to 30% of all donations.<sup>1,3,4</sup> Although this type of donation has grown significantly in recent years in countries like the United States and Canada,<sup>1,4</sup> it continues to be rare in Spain.<sup>5</sup>

We present the case of a girl aged 15 months with non-compaction dilated cardiomyopathy and severe ventricular dysfunction who required support with an external ventricular assist device and was placed on the transplant waitlist. At 22 days from admission in the paediatric intensive care unit (PICU) she developed convulsive seizures, with imaging revealing the presence of a subdural haematoma with midline shift that required surgery. After 72 hours, there was evidence of an acute ischaemic stroke of the left middle cerebral artery that in 3 days had progressed to massive strokes with bilateral involvement of the anterior and middle cerebral arteries and the basal ganglia. Given the poor prognosis, the decision was made to withdraw life-sustaining treatment. The donation protocol was activated after this decision, and the patient was evaluated by the transplant coordination team, while the family expressed the wish to donate. The assessment by the transplant team found positive results for the kidney, liver (although a compatible recipient was not found for this organ) and tissues. The patient had not gone through brain death, so this was a controlled DCD donation. The process involved transport of the patient to an operating room (while the urology team got ready in an adjacent room), where mechanical ventilation and the ventricular assist device were withdrawn. During the entire process, the paediatric intensive care specialists in charge of the patient maintained sedation and analgesia per the life-sustaining therapy withdrawal protocol. Sixteen minutes after supportive care was withdrawn, the patient

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was declared death based on the absence of electrical and mechanical cardiac activity.

This has been the first case of controlled DCD carried out in our PICU, and we considered that sharing this information would be relevant, as many health care professionals are still unfamiliar with the process and few guidelines have been published on DCD in paediatric patients.<sup>4</sup> To increase the possibility of transplantation in this age group, the Organización Nacional de Trasplantes (National Transplant Organization of Spain), in the framework of Plan 50 × 22 (to achieve 50 donors per million inhabitants in the 2018–2022 period), proposed establishing guidelines in collaboration with paediatrics and neonatology associations on paediatric donation in general and paediatric donation after circulatory death in particular.<sup>6</sup>

In conclusion, in the field of paediatrics, controlled organ donation after circulatory death should be considered in any patient in whom withdrawal of life-sustaining therapies is anticipated. This approach could increase the number of potential donors, but specific protocols need to be developed and its particularities in the paediatric population need to be investigated to extend this practice to paediatric patients.

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Laura Butragueño Laiseca<sup>a,\*</sup>, Milagros Sancho González<sup>b</sup>, Jesús López-Herce Cid<sup>a</sup>, Santiago Mencía Bartolomé<sup>a</sup>

<sup>a</sup> Servicio de Cuidados Intensivos Pediátricos, Hospital General Universitario Gregorio Marañón, Madrid, Spain

<sup>b</sup> Coordinación de Trasplantes, Servicio de Medicina Intensiva, Hospital General Universitario Gregorio Marañón, Madrid, Spain

\* Corresponding author.

E-mail addresses: [laura.bl@hotmail.com](mailto:laura.bl@hotmail.com), [laura.butragueno@salud.madrid.org](mailto:laura.butragueno@salud.madrid.org) (L. Butragueño Laiseca).

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## Suitability and validation of WhatsApp<sup>TM</sup> as a method of communicating with family<sup>☆</sup>



### Predisposición y validación del uso de WhatsApp<sup>®</sup> como método de comunicación con familias

Dear Editor:

WhatsApp<sup>®</sup> is the leading instant messaging application. There is also a separate application (WhatsApp<sup>®</sup> Business) that provides tools to automate, sort and quickly respond to messages. It offers end-to-end encryption, which guarantees the appropriate level of privacy required for the exchange of medical information.<sup>1</sup> There is a growing interest in research on this form of communication within the framework of the doctor/patient relationship, but only a few studies have been published in the literature, none of

them in the field of paediatrics.<sup>2,3</sup> The aim of our study was to assess the patterns of use of this application by families, and to establish their level of satisfaction with it.

We conducted a descriptive qualitative study in a series of families recruited by consecutive sampling that visited a private clinic staffed by 3 paediatricians between May and October 2018. The legal guardians of the patients signed an informed consent form handed out by the clerical staff of the clinic, which adhered to current regulation on personal data protection.<sup>4</sup> The WhatsApp<sup>®</sup> Business application was installed on a mobile device that was exclusively dedicated to this purpose and exclusively owned by the clinic. We set up a schedule for messaging for each physician based on their availability, with preferential use of the desktop version of the software (WhatsApp<sup>®</sup> Web), with automated delivery of prewritten messages to expedite the response process. We collected general information on messaging: total number of messages sent out, delivered, read and received. We also collected data on the pattern of use of the service by families: day and time, need of in-person visit, response time and most frequent reasons for consultation. At the end of the study period, we sent families a 12-item questionnaire to rate their experiences (Fig. 1). We sent the questionnaire (Google<sup>®</sup> Forms) through the MailChimp<sup>®</sup> email campaign platform. We analysed the data with the Google<sup>®</sup> Spreadsheets platform.

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