



Oral Presentation

Aircool

Banu Karakus Yilmaz, Duygu Sultan Oran, Sule Ozsoy

Alanya Alaaddin Keykubat University Emergency Department * Experimental Research and Skills Development Center, Bagcilar Training and Research Hospital * Department of Pathology, Bagcilar Training and Research Hospital

Introduction: World Health Organization(WHO) defines sudden deaths as "deaths happening within 24 hours of the beginning of symptoms". Sudden cardiac deaths account for 15-20% of all deaths. The first aim after cardiac arrest is to provide spontaneous circulation, and then the most important thing is to prevent the progress of neurological damage. **Aim:** Provide the patient with chilled oxygen therapy and to establish a system that will enable the therapeutic hypothermia application to be initiated as early as possible. For this purpose, we have produced a medical device to be used in the laboratory of experimental animals in order to study animal models before human models. While this device is available prototypical for human studies, it is sufficient to induce hypothermia for animal experiments specifically. **Device:** It has the feature that cooling oxygen to (-4) degrees. In addition, the device is available to the appropriate pressure and volume of oxygen to the experimental animal. In the creation process of the device, its compliance with medical standards was taken into account. Although the device was developed to develop a new method in the treatment of therapeutic hypothermia, it can also be used in studies planned to with cold air or other gases in animal experiments. The most important disadvantage of the current prototype device is that it is not compatible with mechanical ventilators, and we continue to work on this subject. **Innovative aspect of the device:** There is no treatment way in which only oxygen is used by cooling in order to create hypothermia for therapeutic purposes in the world. The currently used technique cool the patient by placing a cannula in the large vein and cooling the blood passing around the cannula, or methods that allow the patient to cool down by injecting a large amount of cold serum into the vein. We have determined our method is a faster, more effective and reliable method compared to the currently used methods. **Result:** The device can be used in animal experiment studies where the therapeutic hypothermia method will be used in experimental animal laboratories, for educational purposes in veterinary faculties, and in pre-production studies in pharmaceutical companies.

Keywords: therapeutic hypothermia

Corresponding Author: Banu Karakuş Yılmaz

E-mail: banukarakus@yahoo.com