Medical Devices

Ultrathin adhesive multielectrode patch

A research group of the Andalusian Public Health System has developed an innovative medical device based on ultra patch, equipped with electrodes to acquire data about the patient's heart rate.

Oficina de TRANSFERENCIA DE TECNOLOGÍA
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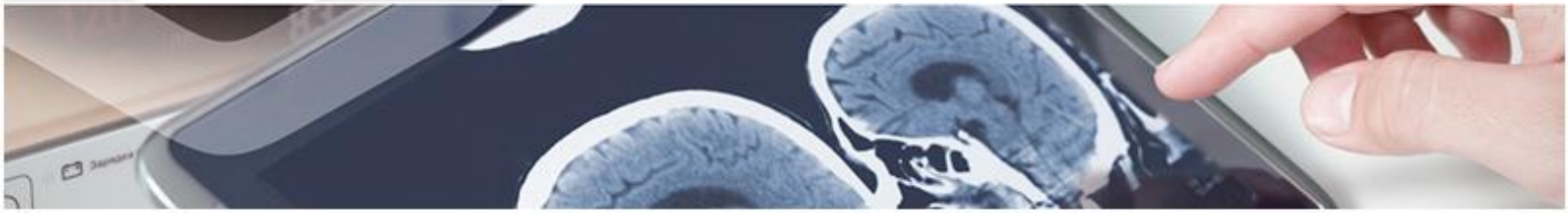

Description

Continuous monitoring is a very common technique in various areas of medicine, such as in accident and emergency settings, both within and outside hospital, and in acute and surgical patient environments.

For this type of monitoring, there are currently different models of single-lead electrode patches which have several drawbacks, namely:
- Discomfort for the patient: snagging of the leads, the need to keep to a certain posture, disrupted sleep caused by unnecessary alarms.
- Interference with other healthcare activities, such as difficulty in accessing the patient's chest to provide care, or tangling with the leads of other equipment or devices attached to the patient (such as IV systems).
- Problems with measuring equipment: including the tangling of cables, snagging, detachment of the electrodes and a reduction in the user-life of the wiring.

There is therefore an unmet need to develop a patch with electrodes that tackle the problems posed by current technology, and which can reduce the discomfort to the patient while also improving the quality of care.

The developers of this invention have discovered that it is possible to pick up cardiac signals from a single multielectrode patch, thereby avoiding the use of several electrodes as has hitherto been common practice. This single patch has the same capacity to capture electrical signals transmitted through the skin as the traditional system of independent electrodes, while overcoming the said limitations of the latter system.

Advantanges

1. Its slim design enables, the patch to be placed not only on the chest of the patient, but also on their back, causing no harm, ulceration or discomfort, even in long-stay patients.

2. The ability to place the patch to the back of the patient avoids the problems of adhesion of the electrodes on the chest, and the problems posed by having cables strewn across the patient's chest. The chest area is, therefore, also free for any intervention that may need to be performed at any time.

3. The electrode patches can be made of any commonly-used material, even radiolucent materials.

IntelLectual Property

This technology is protected by patent.

Aims

We are looking for a partner interested in a license and/or a collaboration agreement to further develop and exploit this innovative technology.

Classification

Area: Medical device
Pathology: Cardiovascular and circulatory system

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