

Disposable Ambu Blue Sensor SU electrodes versus reusable Welsh electrodes for resting ECG

Year: 1999

Hospital: Cardiology Outward Unit, Hospital Mutua De Terrassa, Barcelona, Spain.

Aim: The aim of this study was to compare re-usable Welsh cups/plate electrodes and disposable Ambu Blue Sensor SU electrodes as regards to handling, patient comfort, quality of the ECG trace and hygiene.

Number of patients: 100

Summary: The Welsh cups were significantly more difficult to place than the SU electrode. Approximately 25% of the users in the Welsh cup group had difficulties in placing the electrodes on the patients while in the SU group there were no difficulties. Around 10% of the patients were bothered by the Welsh cup electrodes during electrode application and ECG recording. None of the patients were bothered by the SU electrodes during electrode application and ECG recording. In both the SU group and the Welsh group, only a small fraction of the patients were bothered during electrode removal. Around 35% of the Welsh cup electrodes fell off during the ECG measurement procedure. None of the SU electrodes fell off during the ECG recording procedure.

Interference on the ECG trace was seen in 35% of the patients in the Welsh cup group versus only 2% in the SU group. The signal quality was significantly better with the SU electrode where only 6% of all traces were evaluated as poor or very poor compared to 16% in the Welsh cup group.

Microbiology tests showed the presence of microorganisms on the Welsh cup electrodes. The microorganisms could not be removed by cleaning the product according to manufacturer's instructions. Several of the bacteria seen on the electrodes are described in literature as related to hospital-acquired infections.

