1 THE USE AND IMPACT OF 12-LEAD ELECTROCARDIOGRAMS IN ACUTE STROKE PATIENTS: A SYSTEMATIC REVIEW

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Aim Stroke is a leading cause of mortality and disability across the globe. Emergency Medical Services assess and transport a large number of these patients in the prehospital setting. Guidelines for UK ambulance services recommend recording a 12-lead electrocardiogram in the prehospital environment, providing this does not add to significant delay in transporting the patient to hospital; however, this recommendation is not based on any evidence.

Methods A systematic review was conducted to search and synthesise the literature surrounding the use of prehospital electrocardiograms in acute stroke patients, focusing on the prevalence of abnormalities and their association with prognosis and outcome. Online databases, references from selected articles and hand searches were made to identify eligible studies. Two authors independently reviewed the studies to ensure eligibility criteria were met. Main outcomes were presence of abnormality on electrocardiogram, mortality and disability. No studies set in the prehospital environment were found by the search; therefore the eligibility criteria were widened to include hospital-based studies. A total of 18 studies were subsequently included in the review.

Results Although the prevalence of electrocardiogram abnormalities appears common in hospitalised patients, their prognostic impact on mortality, disability and other adverse outcomes is conflicting amongst the literature. There is a lack of research surrounding the use of prehospital electrocardiogram in acute stroke patients.

Conclusion Future studies should be based in the prehospital environment and should investigate whether undertaking an electrocardiogram in the prehospital setting affects clinical management decisions or has an association with mortality or morbidity.

Conflict of interest None declared

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2 DOES CURRENT PRE-HOSPITAL ANALGESIA EFFECTIVELY REDUCE PAIN IN CHILDREN CAUSED BY TRAUMA WITHIN A UK AMBULANCE SERVICE: A SERVICE EVALUATION

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Aim Analgesic treatment of pre-hospital injured children is viewed as 'suboptimal' with few receiving analgesia. The aim of this study was to explore current analgesia given to traumatically injured children in the pre-hospital setting and examine whether a clinically meaningful reduction in pain was achieved.

Methods We evaluated electronic patient report forms over a two year period (2013 and 2014) within a UK ambulance service NHS trust. All traumatically injured children within the age range of 1 to 17 with a clinical impression of a fracture, dislocation, wound or burn were included. Patients with a Glasgow Coma Scale of <15 were excluded. The outcome measure was a reduction in numeric pain rating scale or Wong and Baker faces of ≥2 out of 10.

Results Of the evaluable patients (n=11,317), 90.8% had a documented pain score, or a reason why a pain score could not be documented. For patients reporting pain (n=7,483), 51.6% (n=3,861) received analgesia, 9.6% (n=717) received no analgesia but did receive alternative treatment and 38.8% (n=2,905) received no analgesia and no alternative treatment. Morphine sulphate IV, oral morphine, Entonox, paracetamol suspension and poly-analgesia all achieved a clinically meaningful median reduction in pain score.

Conclusion Analgesia administered to traumatically injured children in the pre-hospital setting within this UK ambulance service NHS trust does produce clinically meaningful reductions in pain. The concern is that a large number of patients received no analgesia or alternative treatment. There is a real need to identify barriers to analgesia administration in this patient group.

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3 CHOKING CHILDREN – SHOULD WE BE SCARED?

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Aim Choking in children is a feared condition, which potentially can deteriorate to hypoxic cardiac arrest and death. Fast recognition and immediate initiation of basic life support (BLS)1, primary back blows and abdominal thrusts given by bystanders and secondary activation of the Emergency Medical System (EMS) are vital for the survival.

Methods The Region of Southern Denmark has a tiered response with prehospital emergency physicians to supplement the ambulance service. EMS physicians register all contacts in a database. We reviewed the database for all children below the age of 5 years who suffered from choking in 2009 to 2014.

Results From 70.289 total contacts 4.857 contacts was with children less than 5 years. In this group 98 children suffered from choking. In 78% BLS had resolved the obstructing foreign body before arrival of EMS services. Seventeen children had successful treatment with BLS by ambulance personal. Five children required advanced airway management and one child required cardiopulmonary resuscitation. No deaths were registered. None of the children with near fatal choking had any comorbidity prior to incident.

Conclusion Choking in children is an uncommon emergency with only 0,14% of all contacts. We found like others2 that BLS solves most cases before arrival of EMS. This demonstrates the importance of immediate initiation of BLS and keeping the chain of survival as a concept. Death to choking is rare among small children. Near fatal choking resolves with skills and routine in advanced airway management and advanced life support.

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