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MAEMC Abstracts

☐ NONINVASIVE VENTILATION IN ELDERLY PEOPLE AT THE EMERGENCY DEPARTMENT: EPIDEMIOLOGICAL CHARACTERISTICS AND CLINICAL RESULTS

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Body text:

Background: In elderly people, non-invasive ventilation (NIV) could be a good alternative to procure a respiratory support, avoiding as much as possible the complications of invasive ventilation.

Methods and Results: This retrospective study was conducted at the emergency department of La Rabta (Tunisia). 66 old patients (≥65ans) requiring NIV for acute respiratory failure (ARF) were included. Mean age was 76 years (± 7). The median Charlson index was 5. ARF was related to acute heart failure in 68%, acute exacerbation of chronic obstructive pulmonary disease in 53% and pneumonia in 39% of cases. 48% had more than one etiologic diagnosis. Hypercapnic acute respiratory failure was observed in 61%. On starting NIV, the average pH was 7.31 (± 0,11) and PaCO2 56 mmHg (± 21), After NIV, the average pH was 7,38(± 0,11) and PaCO2 53 mmHg (± 26). Improvement of pH was significant (p < 0,05). 61% of patients were discharged at home, 9% were admitted to intensive care unit. Invasive ventilation was performed in 4%. 23% died. Success of NIV was observed in 69% of patients. Conclusion: NIV can be of a great interest in elderly people. Our study showed a significative improvement of pH after NVI and a clinical success in 69% of patients.

Did the research involve human subjects, including review of existing records/material?: Yes

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☐ FACTORS AFFECTING CARDIOVERSION AND DEFIBRILLATION SUCCESS RATE

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Body text:

Background: Electrical cardioversion and defibrillation are common procedures in the management of patients with cardiac arrhythmias. There are a number of variables that influence the outcome of a cardioversion and/or defibrillation attempt. We attempt to identify factors affecting cardioversion and defibrillation success rate.

Methods. Five major databases were systematically searched for relevant studies published up to July 2018. These studies were then assessed for level of evidence and risk of bias. Device-related variables included electrodes (i.e, position, and size), and energy delivered (i.e, joules, type of waveform). Patient-related variables included transthoracic impedance, and type of arrhythmia. Results. Sinus rhythm was restored in 87% using an anteroposterior position vs. 76% with anterolateral orientation (n = 301). Larger pad surface area decreased resistance; one shock (200 joules) was successful in 82% (two large pads (12 cm) vs. 31% (two small pads 8 cm) (n = 105). Defibrillation energies were the same for monophasic vs. biphasic waveforms (200, 200, 360 joules) in patients with ventricular fibrillation (n = 168). Patients with atrial fibrillation receiving biphasic waveform cardioversion were associated with greater first shock efficacy (60% vs. 22%); fewer total shocks (1.7 vs. 2.8); less energy (217 vs. 548 joules) vs. monophasic cardioversion (n = 210). Repetitive 3-minute interval shocks decreased transthoracic impedance greater than repetitive shocks at 15 or 60 second intervals. Patients who received transthoracic termination of monomorphic ventricular tachycardia required lower energy (70 to 100 joules), while polymorphic ventricular tachycardia required higher energy (150 to 200 joules) (n = 203).

Conclusion. It is important to become familiar with current cardioversion devices, correct size and placement of paddles, and the appropriate energy setting to ensure effective shock administration. While traditional monophasic waveform cardioverters were commonly used, biphasic waveform