Dependent variables included analytical values and final outcomes (ROSC and final neurological condition CPC grades I–II). Statistical analysis: Kolmogorov-Smirnov/Lilliefors test of normality, bivariate (T-test and Chi-square-test) and multivariate (logistic regression and recursive partitioning) analysis and association measures (odds ratio-OR).

Results Our EMS attended 749 OHCA. Eighty-seven cases were excluded due to lack of data on gasometry (52)/FR (35). We analyzed 662 cases (137 women, 65.1±16.1 years-old), 46.1% were shockable rhythms and 63% received basic-CPR. pH was 7.13±0.15 in CPR-by-FR-cases and 7.06±0.18 in non-CPR-by-FR-cases (p<0.001). PvCO2 69±23 vs 77±25 mmHg (p<0.001), base excess −6.6±5.4 vs −8.6±6.6 mmol/L (p<0.001) and lactate 6.4±2.9 vs 7.1±3.3 mmol/L (p=0.008). CPR-by-FR (OR 1.83, CI95% 1.30–2.56, p<0.001) and shockable-rhythm (OR 3.32, CI95% 2.37–4.65, p<0.001) were independently associated with higher pH. ROSC occurred in 62.8% of CPR-by-FR-cases and 54.7% of non-CPR-by-FR-cases; OR 1.40, CI95% 1.02–1.93, p=0.039). Recovery CPC I–II occurred in 27.1% of CPR-by-FR-cases and 19.2% of non-CPR-by-FR-cases; OR 1.57, CI95% 1.06–2.30, p=0.022).

Conclusion Basic-CPR by FR slows down metabolic and respiratory acidosis. This entails better outcomes. These data reinforce universal CPR training programs.

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4 PRE-HOSPITAL ADMINISTRATION OF TRANEXAMIC ACID IN HEMORRHAGIC TRAUMA IS ASSOCIATED WITH HIGHER SURVIVAL RATES

[1]FJ Garces Garces*, [1]E Corral Torres, [2]JM Lopez-Villalta Garces, [1]EJ Simones Da Silva Pereira. *[1]SAMUR-PC Ciudad De Madrid, Spain; [2]HU Puerta De Hierro, Madrid, Spain*

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Background Studies carried out in the hospital setting have objectivized the benefit of tranexamic acid (TXA).[1] Under the hypothesis that this is a time-dependent drug, we want to analyze the effect that a very early (on-scene) administration of the drug has over the survival of the hemorrhagic patient.

Method Cases and controls, analyzing consecutively all patients susceptible of treatment, (hemorrhagic trauma, hemodynamically unstable with evidence of bleeding, whether analytical or image-based) between 2015–2018. Cases: on-scene standard treatment administered. Controls: hospital-treated. All received TXA at varying times. Epidemiological Variables: Age, gender, lesional mechanism, severity scales: Trauma and Injury Severity Score (TRISS), Revised Trauma Score (RTS), and Injury Severity Score (ISS). Exposure variable: Early TXA administration. Dependent variable: Survival after 7 days. Inferential statistical analysis: Relationship between categorical variables by Chi-square. Multi-variate binary logistic regression (MBLR) adjusted for TRISS, RTS and ISS indices. Confidence intervals p<0.05.

Results 171 patients: 103 cases, 68 controls. Mean age: 42.05 years (SD-20.4.) 42.1% (71) deceased before 7 days. There is homogeneity in the severity indices among cases and controls: ISS; 47.5(SD:19.7) vs. 42.8 (21.5) p=0.015, RTS; 4.66(SD-2.06) vs. 4.73(SD-1.53) p=0.808 y TRISS; 63.02(SD-35.7) vs. 60.04(SD-31.6) p=0.572. After adjusting MBLR for ISS, TRISS, and RTS, survival after 7 days was higher in cases than in controls: 66.0% cases (out-of-hospital TXA administration) vs. 45.6% controls, p=0.006. Odds ratio: 2.32 (1.24–4.34.)

Conclusion Early (on-scene) TXA administration is intensely associated with an improvement in survival indices in hemorrhagic patients, which must lead to its procedural on-scene implementation.

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5 SERIOUS CONDITIONS AMONG PATIENTS WITH NON-SPECIFIC CHIEF COMPLAINTS IN THE PRE-HOSPITAL SETTING. A RETROSPECTIVE COHORT STUDY

[1]R Ivic*, [2]L Kurland, [1]V Vicente, [3]M Castrén, [1]K Bohm. *[1]Karolinska Institutet, Department of Clinical Science and Education, Södersjukhuset, Stockholm, Sweden; [2]Örebro University, Department for Medical Sciences, Örebro, Sweden; [3]Helsinki University, Department of Emergency Medicine and Services, Helsinki University Hospital, Helsinki, Finland*

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Background Non-specific complaints (NSC) are common presentations to the emergency medical services (EMS). Patients with NSC often present with normal vital signs. Also, among patients with NSCs approximately one third have serious conditions which are not identified. Patients with NSC's are poorly studied in the pre-hospital setting. The aim of the current study was to describe the outcome serious condition in patients presenting with non-specific chief complaints to the EMS.

Method A retrospective cohort study of all patients≥18 years, reported as presenting with NSC to the EMS in Stockholm County and transported to an emergency department. Patients were identified via EMS electronic patient record and followed via national patient registers. The outcome serious condition was defined in consensus. Descriptive statistics and regression analyses were performed.

Results 3780 patients were included. Median age was 77 years. Serious conditions were present in 1334 (35.3%) of the patients. Admission to in-hospital care rate was 67.6%. The in-hospital mortality rate was 135 (10.1%) (OR 6.6 CI 95% 3.5–12.5) and 30 day mortality was 269 (20.2%) (OR 4.4 CI 95% 3.3–5.7) in the group with serious conditions compared to 25 (1.0%) and 103 (4.2%), respectively, for the group with no serious conditions. Elevated triage levels by rapid emergency triage and treatment system (RETTS) was associated with serious condition as well as mortality rates.

Conclusion One third of the patients presenting with NSC in the pre-hospital setting have an underlying serious condition which is associated with in-hospital admission and risk of death.

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