EMERGENCY MEDICAL SERVICES IN OUT-HOSPITAL SETTING, MEAN ARTERIAL PRESSURE AND EXCESS BASE ARE EARLY PREDICTORS FOR HEMORRHAGIC SHOCK IN STAB WOUNDS.

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BACKGROUND

Patients with stab wounds are currently more frequent in Out-hospital setting (EMS). Therefore, it's necessary volume resuscitation to achieve permissive hypotension. This study seeks predictive and objective criteria for hemorrhagic shock, and thus, surgeons can proceed without delay.

METHOD

- Stab wounds data attended during 4 years by EMS with 7 days follow-up.

Predictors:
- ❑ Mean Arterial Pressure (MAP)
- ❑ Heart Rate
- ❑ Lactate
- ❑ Excess Base (EB)
- ❑ Hemoglobin

Wounds:
- ➢ Non-penetrant (NP)
- ➢ Penetrant without major hemorrhagic involvement (PEN)
- ➢ Penetrant with hemorrhage that required aggressive hemoderivatives replacement (HEM)

- Descriptive, retrospective cohort study taking central and dispersion measures.
- Statistical analysis using Kruskal Wallis, Kolmogorov Smirnov, and Scheffé test.
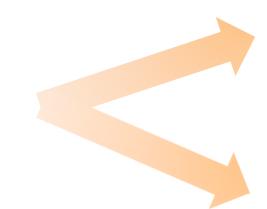
RESULTS

Data of 175 patients
94.9% male
mean age 32.1 years (IQ 22.2-40).

Wounds
NP: 34.4%
PEN: 39.55%
HEM: 25.9%

Statistical significance for injury types:
MAP $p<0.01$; EB $p=0.001$; Lactate $p=0.010$.

Scheffé test, same predictors have statistical significance.
- MAP (PEN/HEM $p<0.001$; NP/HEM $p=0.0003$; NP/PEN $p=0.0003$)
- EB (PEN/HEM $p=0.067$, NP/HEM $p=0.003$, NP/PEN $p=0.003$)
- Lactate (PEN/HEM $p<0.086$, NP/HEM $p=0.020$, NP/PEN $p=0.020$)

CONCLUSIONS

- ✓ EB, lactate and especially MAP can be considered predictors of early diagnosis for massive hemorrhage.
- ✓ EMS should have adequate technology to perform blood analysis in situ.
- ✓ Early volume replacement is an effective option to avoid delaying surgical intervention.

IT TAKES A SYSTEM TO SAVE A LIFE